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TRENDS IN CATCHES AND LANDINGS

PACIFIC FISHERIES: 1970 - 1991

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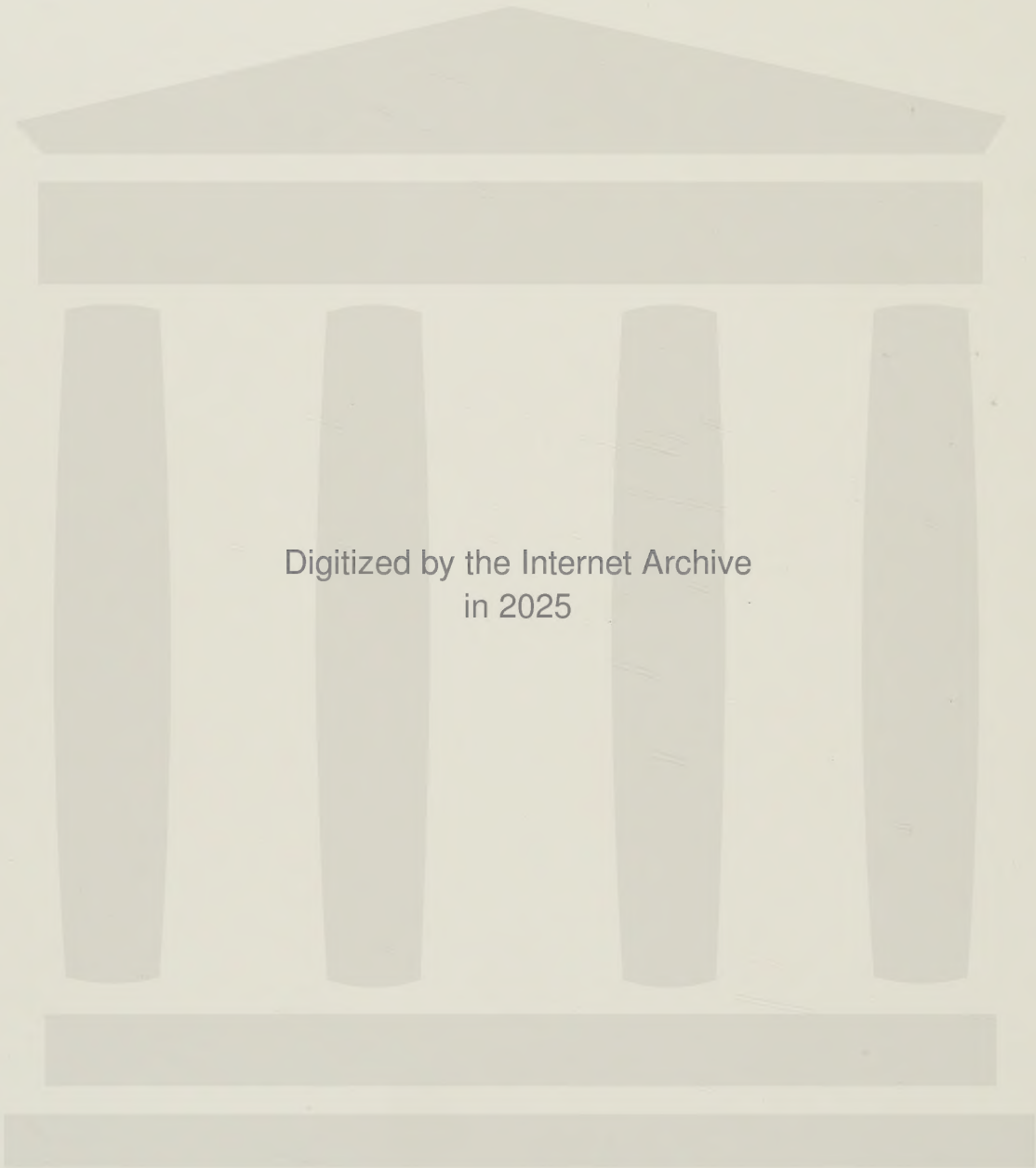

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TRENDS IN CATCHES AND LANDINGS

PACIFIC FISHERIES: 1970 - 1991

by

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ROME, February 1993

PREPARATION OF THE DOCUMENT

The document gives the trends in fish catches by species and by area from 1970 to 1991, in graphic form for the Pacific Ocean. It has been prepared in order to facilitate interpretation of data contained in the FAO Yearbooks of Fishery Statistics, "Catches and Landings". Included are tables indicating changes in species landed and proportions of total catches between three 10-year intervals.

The document includes trends for the entire Pacific Ocean, as well as each major fishing area for statistical purposes.

Stamatopoulos, C.
Trends in catches and landings. Pacific fisheries: 1970 - 1991.
FAO Fisheries Circular. No. 855.3. Rome, FAO. 1993. 213p.

ABSTRACT

The document provides catch time series of the Pacific Ocean fisheries over the period 1970-1991. Trends are illustrated by means of line graphs and summary tables. Also examined are proportions of groups of species to total catches and the changes in the proportions over three distinct periods in 1990, 1980 and 1970. Changes in catch time series have been examined for the whole Pacific Ocean as well as for each of the seven major statistical areas.

The FAO Fisheries Circular is a vehicle for distribution of short and ephemeral notes, lists, etc., including provisional versions of documents to be issued later in other series.

FOREWORD

This document provides the trends in catches for the Pacific Ocean over the past 22 years. It is the third part of three documents prepared for each of the world's oceans. [1] The trends are presented in graphic form from catch by weight data (including aquaculture) published in the FAO Yearbooks of Fishery Statistics: "Catches and Landings", 1970 to 1990. Data for 1991 are preliminary as contained in the Fishery Information Data and Statistics Service's database, FISHDAB.

Throughout the document, catch statistics are presented by two types of standard tabulations. Tables of the first type refer to catches in 1990 and show the ranking order of the species groups in relation to their proportions of the total catch for each FAO Major Fishing Area for Statistical Purposes in the Pacific. This is also provided for each fishing area in relation to the total Pacific catch. Tables of the second type are for comparison of the proportions of the same species groups for the years 1980 and 1970. The purpose of this approach is to allow for the identification of any significant changes in ranking and catch proportions between the three periods. The results are supplemented by graphical presentation of catches by species and by areas for all years 1970 - 1991.

For the entire Pacific Ocean, the production of all diadromous and marine fish, crustaceans and molluscs in the seven major fishing areas, has been steadily increasing over the period. This upward overall trend, indicated by the last plot on Page 7, is due mainly to increased catches of small pelagics, gadoids, miscellaneous marine fish and species of the group of jacks, mullets, sauries, etc. Tables 1.1 and 1.2 on Pages 4-5 indicate that catches for the entire Pacific Ocean have increased from 33.3 million t. in 1970 to 52.7 million t. in 1990 and now account for about 64% of the total world marine catch. In fact most of the increase in the world's marine catch during the 1980s has been from the Pacific and from five species: Alaska pollack, Peruvian anchovy, Japanese pilchard, South American pilchard and Chilean jack mackerel.

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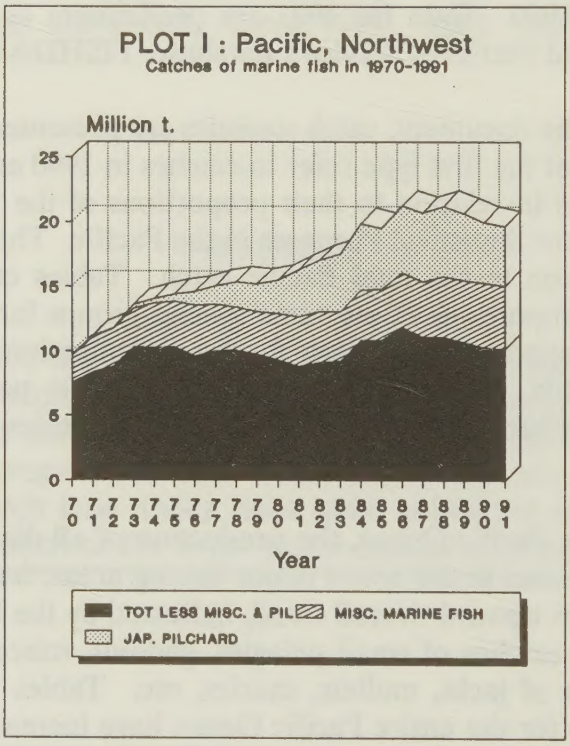
[1] The Antarctic Ocean is included within the Atlantic, Pacific and Indian Oceans. See Map on Page 1

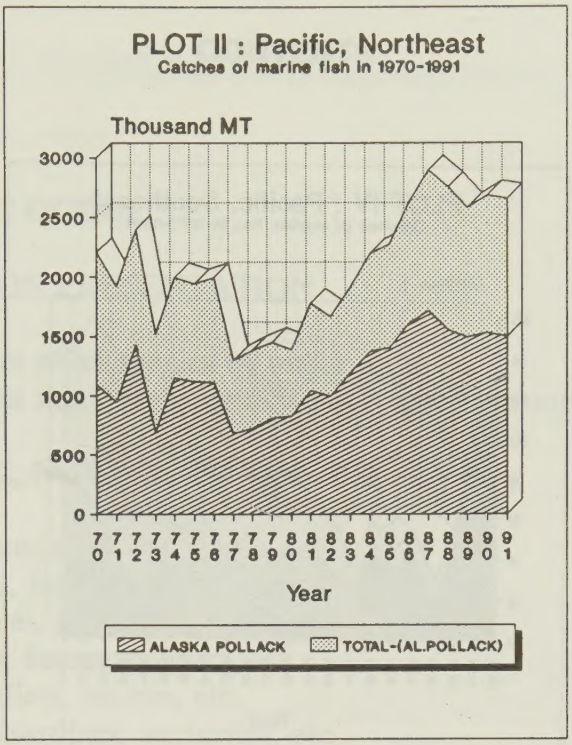
Almost half of the Pacific catches are taken in the Northwestern part (48.5% of the total production in 1990), with an increase from 12 million t. in 1970 to 25.5 million t. in 1990.

While catches have continuously increased over the past 22 years, there have been no significant shifts in the importance of the top species groups. Tables 1.3 and 1.4 on Pages 8-9 show that the group of small pelagics has been dominant in each of the periods 1970, 1980 and 1990.

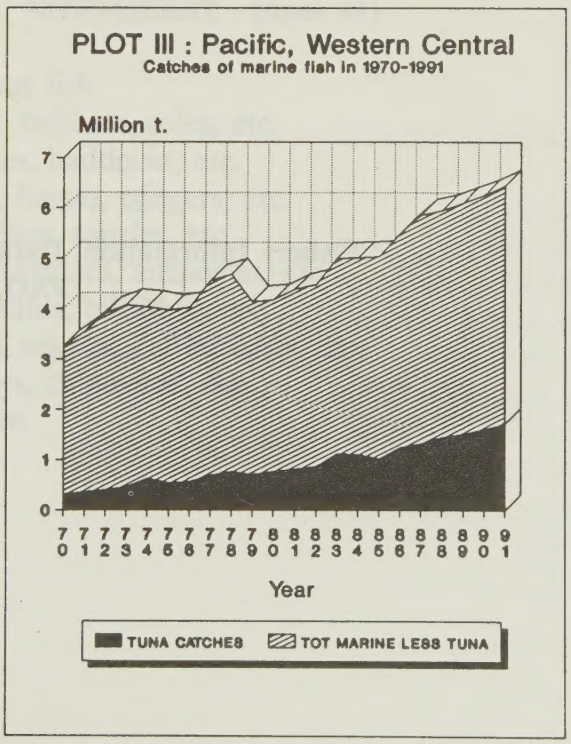
There are distinct differences in the production by FAO major fishing areas for statistical purposes. In Plot I, the Pacific Northwest, the overall catch consistently increased until recently. A significant reason for this increase is the abundance of Japanese pilchard and the continuing amount of miscellaneous marine fish taken. The Plot shows that with the exception of the Japanese pilchard and miscellaneous marine fish, the catch of all other species has been relatively stable.



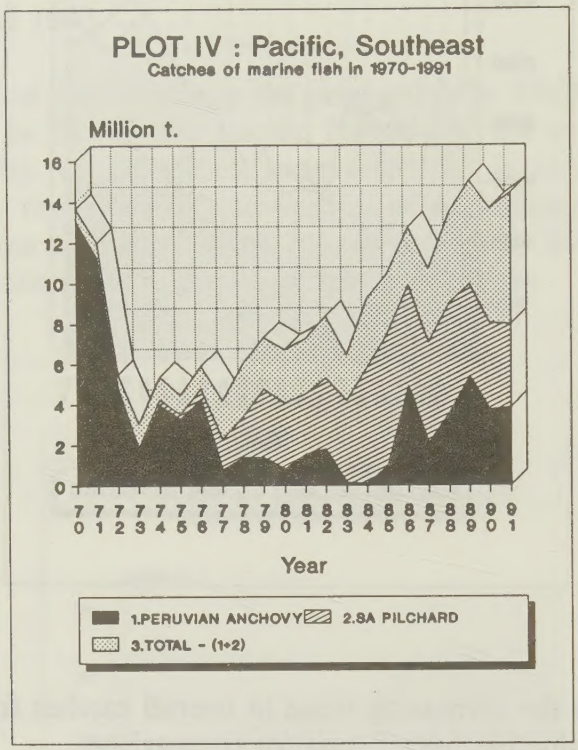
For the Pacific Northeast, Plot II indicates the size of the catch of Alaska pollack in comparison with the marine catch of all other species.



Plot III provides the increasing trend in overall catches for the Pacific, Western Central and the increasing catches of tuna for comparison.



For the Pacific Southeast, Plot IV gives the dramatic decline in Peruvian anchoveta that occurred in 1973 and the subsequent increasing catches of South American pilchard. It is to be noted that the overall catches have returned to the previous levels of 1970.



C. H. Newton
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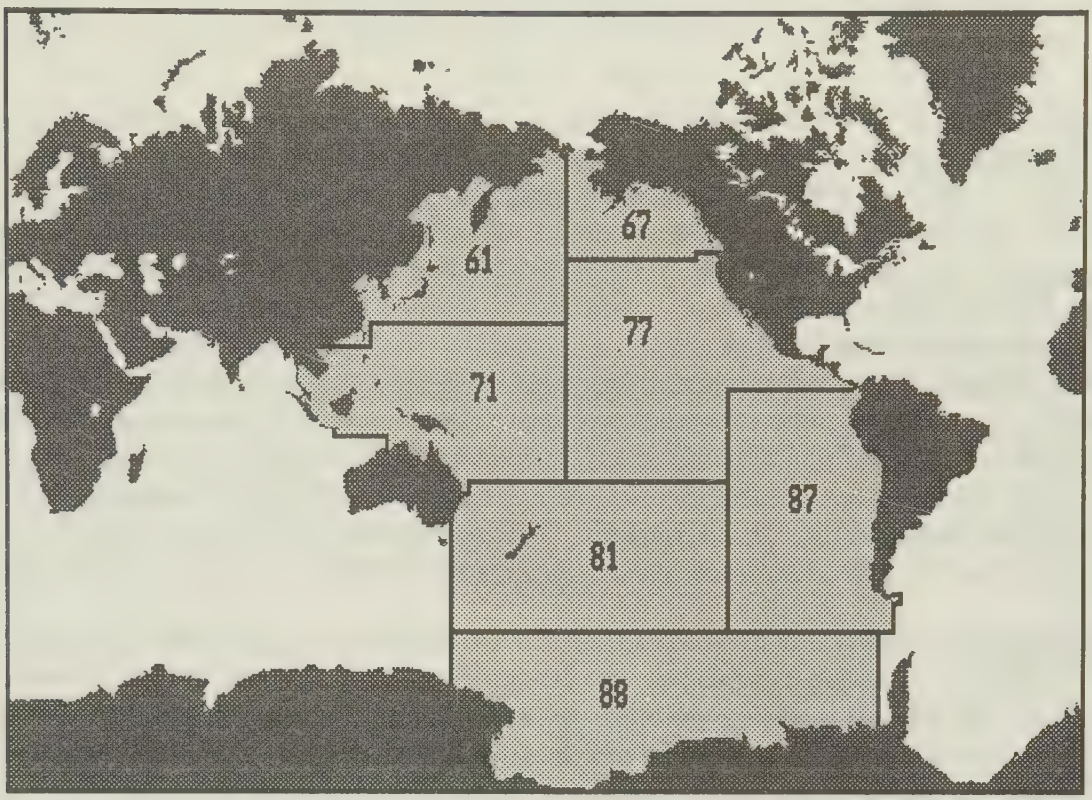
1. PACIFIC OCEAN - MAJOR STATISTICAL AREAS



Area code	Name	Surface area in square km
61	Pacific, Northwest	20 476 000
67	Pacific, Northeast	7 503 000
71	Pacific, Western Central	33 233 000
77	Pacific, Eastern Central	57 467 000
81	Pacific, Southwest	33 212 000
87	Pacific, Southeast	16 611 000
88	Pacific, Antarctic	10 386 000

NOTES ON PRESENTATION

Throughout the document catch statistics are presented by two types of tables. Tables of the first type refer to 1990 catches and illustrate the ranking orders of the FAO Major Fishing Areas for Statistical purposes in relation to their proportions of the total catch. This approach is also used for ranking species groups and species within each major species group. Tables of the second type are constructed for comparison purposes to show the proportions of the same areas, species groups and species for the years 1980 and 1970. This allows the identification of any significant changes in ranking and catch proportions between the three periods. The results are supplemented by graphical presentations of catches by area, species groups and species for all years 1970-1991.

Table type 1

Table 1.1 on Page 4 provides an example of major areas ranked by 1990 catches. It indicates that in 1990 Northwest Pacific was ranked first with 25,558,572 MT which is equivalent to 48.5% of the total production in the Pacific Ocean in 1990.

Table 1.3 on Page 8 uses the same approach for ranking species groups with respect to 1990 catches. It indicates that in 1990 the species group of cods, hakes, haddocks, etc., was ranked second with 7,278,069 MT which is equivalent to 13.8% of the total production in the Pacific Ocean.

Table 1.5 on Page 16 shows the ranking order and catch proportions of species of the group of herrings, sardines, anchovies, etc., in 1990. It indicates that during this period South Ameican pilchard was ranked second with 4,253,718 MT which is equivalent to 27.8% of the total production of this group in the Pacific Ocean.

Tables of this type also provide linear trends which have been formulated by examining the time series of catches for the period 1970-1991 and calculating relative indices of increase, expressed in percentage form, and varying from -100% to +100%. These were grouped to represent basic trend categories using the following criteria:

50% to 100%	Sharp rise	-100% to -50%	Sharp decline
5% to 50%	Rising	-50% to -5%	Declining
0% to 5%	Stable (+)	-5% to 0%	Stable (-)

Table type 2

Table 1.2 on Page 5 provides an example of a comparison of ranking orders and proportions applied to major fishing areas for the years 1990, 1980 and 1970. The table indicates that the ranking order of total catches by area was changed at the top when Northwest Pacific was shifted from the second place in 1970 to the first place in 1980 and 1990.

Table 1.4 on Page 9 compares the ranking orders and proportions of catches by species group for the years 1990, 1980 and 1970. Its second entry indicates that in 1970 the group of cods, hakes, haddocks was ranked third with 3,564,700 MT (10.7% of the 1970 production in the Pacific Ocean). In 1980 it remained third with 4,597,979 MT (13.3%) and in 1990 it was ranked second with 7,278,069 MT (13.8%).

Table 1.8 on Page 18 compares the ranking orders and proportions of catches for species in the group of cods, hakes, haddocks, etc. Its fifth entry indicates that in 1970 North Pacific hake was ranked third with 171,300 MT equivalent to 4.8% of the total production of this group. In 1980 it was fourth with 57,086 and 1.2% and in 1990 it was ranked fifth with 184,344 MT (2.5%).

Line graphs

Each plot consists of a line graph and explanatory remarks referring to a combination of country-species-area. Additional statistics, in percentage form, are provided for measuring the relative fluctuation of a time series and its linear trend.

Plotted data refer to the period 1970 - 1991 and are expressed in metric tons. Graphs are scaled from 0 to the maximum production figure in the plotted time series in order to facilitate comparisons between different sets of data. The percentages to total production (same figures as those in Table type 1) are used for the formulation of cumulative percentages indicating total proportions in a progressive manner.

The fluctuation index is expressed in percentage form and is calculated on the basis of the minimum and maximum values of a catch time series. The highest fluctuation (i.e 100%) occurs when minimum and maximum alternate on a year-to-year basis. The lowest fluctuation (i.e 0%) occurs when a time series is progressively increasing or decreasing, without breaking points in its shape.

The trend index (see note on Table 1), is also expressed in percentage form and is calculated by means of a normalized linear regression of production over time.

1.1 Total production of marine and diadromous fish, crustaceans and molluscs, in the seven statistical areas.

Table 1.1 illustrates proportions of total production of marine and diadromous fish and crustaceans and molluscs by each major fishing area in the Pacific Ocean. Areas have been ranked according to total catches produced in 1990.

Table 1.1

PACIFIC OCEAN

Major fishing areas ranked by 1990 catches of marine and diadromous fish, crustaceans and molluscs

AREA	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Pacific, Northwest	1	25558572	48.5 %	Rising
Pacific, Southeast	2	13948098	26.5 %	Rising
Pacific, Western Central	3	7261073	13.8 %	Rising
Pacific, Northeast	4	3383131	6.4 %	Rising
Pacific, Eastern Central	5	1507433	2.9 %	Rising
Pacific, Southwest	6	1024490	1.9 %	Rising
Pacific, Antarctic	7	658	0.0 %	Rising
PACIFIC OCEAN - TOTAL		52683455	100.0 %	Rising

Major fishing countries ranked by 1990 production: Japan:18.52%, Peru:12.99%, China:12.93%, USSR:11.38%, Chile:9.81%, USA:6.21%, Korea Rep:4.81%, Thailand:3.80%, Indonesia:3.47%, Korea D P Rp:3.11%, Philippines:3.07%, Other nei A:2.06%, Mexico:1.67%, Viet Nam:1.16%, New Zealand:1.06%, Ecuador:0.74%, Canada:0.57%, Malaysia:0.46%, Hong Kong:0.43%, Poland:0.43%, Panama:0.23%, Australia:0.17%, Colombia:0.15%, Venezuela:0.12%, Cuba:0.11%, Solomon Is:0.11%, Other nei B:0.08%, Cambodia:0.08%, Kiribati:0.06%, Fiji:0.06%, Costa Rica:0.04%, Singapore:0.03%,Papua N Guin:0.02%, El Salvador:0.01%, Guatemala:0.01%, Honduras:0.01%,Micronesia:0.01%, NewCaledonia:0.01%, OTHER COUNTRIES:0.02%.

Table 1.2 provides a comparison of area rankings in the three periods 1990, 1980 and 1970, also illustrating the change in ranking and catch proportions that have occurred during 1980 and 1970.

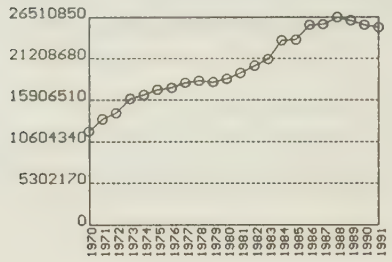
Table 1.2

PACIFIC OCEAN

Ranking order and proportions of catches in major fishing areas for marine and diadromous fish, crustaceans and molluscs in 1990, 1980 and 1970

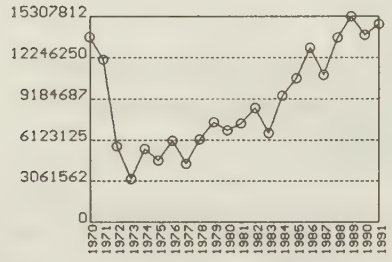
AREA	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Pacific, Northwest	1	18691885	1 54.0%	11984596	2 36.0%
Pacific, Southeast	2	6862956	2 19.8%	13793570	1 41.5%
Pacific, Western Central	3	4838877	3 14.0%	3926728	3 11.8%
Pacific, Northeast	4	1974628	4 5.7%	2643500	4 8.0%
Pacific, Eastern Central	5	1759818	5 5.1%	768970	5 2.3%
Pacific, Southwest	6	510245	6 1.5%	143500	6 0.4%
Pacific, Antarctic	7	3181	7 0.0%	0	7 0.0%
TOTALS		34641590	100.0%	33260864	100.0%

Graphical presentations of time series for all species by each major fishing area, following the ranking order of Table 1.1 (area totals ranked by 1990 catches), are given below. Each plot consists of a line graph and explanatory remarks referring to a combination of country-species-area. Additional statistics, in percentage form, is provided for measuring the relative fluctuation of a time series and its linear trend.



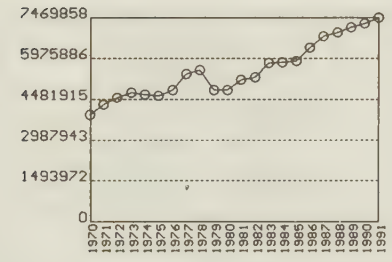
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Northwest
Unit.....Metric tons

Fluctuation..... 0 %
Trend..... 11.63 %
Rank..... 1 of 8 based on:1990
Percent to total..... 48.51 % , Cumulative: 48.51 %



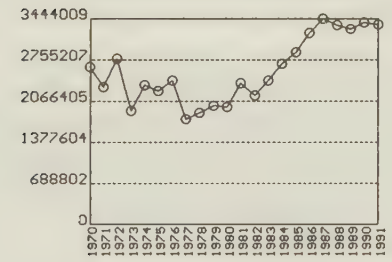
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Southeast
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 13.55 %
Rank..... 2 of 8 based on:1990
Percent to total..... 26.48 % , Cumulative: 74.99 %



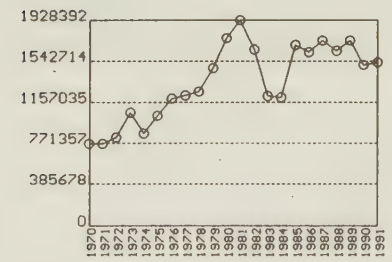
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Western Central
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 9.58 %
Rank..... 3 of 8 based on:1990
Percent to total..... 13.78 % , Cumulative: 88.77 %



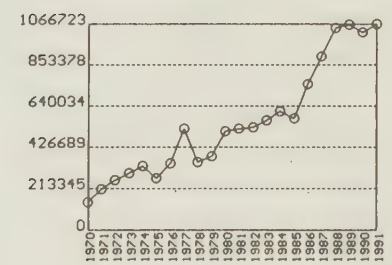
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Northeast
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 8.00 %
Rank..... 4 of 8 based on:1990
Percent to total..... 6.42 % , Cumulative: 95.19 %



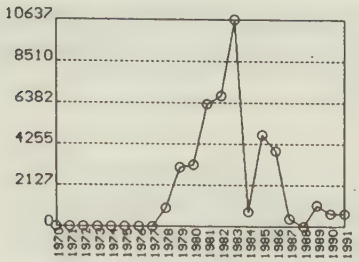
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Eastern Central
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 11.28 %
Rank..... 5 of 8 based on:1990
Percent to total..... 2.86 % , Cumulative: 98.05 %



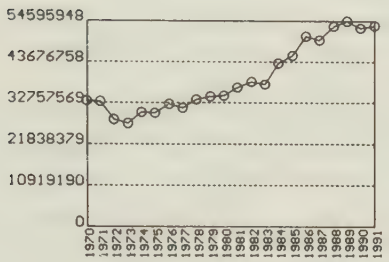
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Southwest
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 27.24 %
Rank..... 6 of 8 based on:1990
Percent to total..... 1.94 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....Pacific, Antarctic
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 20.52 %
Rank..... 7 of 8 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF SPECIES GROUPS
Area.....PACIFIC OCEAN - TOTAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 11.76 %
Rank..... 8 of 8 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

Table 1.3 illustrates ISSCAAP [1/] species groups for diadromous and marine fish, crustaceans and molluscs ranked with respect to percentage of catch by species group to total production in 1990. This ranking is subsequently compared with 1980 and 1970, as provided in Table 1.4.

Table 1.3

PACIFIC OCEAN
ISSCAAP species groups for diadromous and marine fish and crustaceans and molluscs, ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
35-Herrings,sardines,anchovies	1	15305170	29.1 %	Rising
32-Cods, hakes, haddocks,...	2	7278069	13.8 %	Rising
39-Misc. marine fishes	3	7144903	13.6 %	Rising
34-Jacks, mullets, sauries,...	4	6559142	12.5 %	Rising
36-Tunas,bonitos,billfishes,..	5	2951038	5.6 %	Rising
33-Redfishes,basses,congers,..	6	2514028	4.8 %	Stable (+)
37-Mack.,snoeks,cutlassfishes	7	2170865	4.1 %	Stable (-)
45-Shrimps, prawns, etc.	8	1344688	2.6 %	Rising
57-Squid,cuttlefish,octopuses	9	1331832	2.5 %	Rising
42-Sea-spiders, crabs, etc.	10	925130	1.8 %	Rising
56-Clams, cockles, arkshells..	11	835731	1.6 %	Rising
23-Salmons, trouts, smelts,...	12	833222	1.6 %	Rising
54-Mussels	13	688231	1.3 %	Rising
53-Oysters	14	676632	1.3 %	Rising
55-Scallops, pectens, etc.	15	584722	1.1 %	Rising
31-Flounders,halibuts,soles,..	16	567860	1.1 %	Stable (+)
58-Misc. marine molluscs	17	463387	0.9 %	Rising
38-Sharks, rays, chimaeras,...	18	279298	0.5 %	Rising
25-Misc. diadromous fishes	19	118620	0.2 %	Rising
24-Shads, etc.	20	42355	0.1 %	Rising
52-Abalones,winkles,conchs,...	21	40926	0.1 %	Rising
43-Lobsters,spinyrock lobsters	22	11945	0.0 %	Stable (+)
47-Misc. marine crustaceans	23	7889	0.0 %	Declining
44-Squat-lobsters	24	5796	0.0 %	Declining
22-River eels	25	1309	0.0 %	Stable (-)
46-Krill,planct. crustaceans..	26	658	0.0 %	Rising
TOTAL OF ALL SPECIES GROUPS		52683455	100.0 %	Rising

Proportion coming from declining catches.....	0.0 %
from stable catches.....	10.0 %
from rising catches.....	90.0 %

Note: Underlined entries refer to production including significant proportion from aquaculture. Shrimps from marine culture were mainly produced by China, Thailand, Ecuador and Philippines with the following totals (MT): 450 718 (in 1988), 452 710 (in 1989) and 473 871 (in 1990).

For salmons from marine culture the major producers were Chile, Japan, Canada and USA with the following totals (in MT): 32 220 (in 1988), 48 710 (in 1989) and 69 317 (in 1990).

1/ International Standard Statistical Classification of Aquatic Animals and Plants.

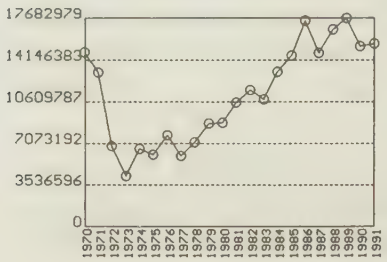
Table 1.4

PACIFIC OCEAN

Comparison of ranks and proportions of ISSCAAP groups for diadromous and marine fish, crustaceans and molluscs in 1990, 1980 and 1970.

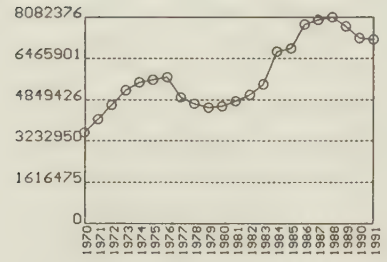
SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
35-Herrings,sardines,anchovies	1	8867263	1 25.6%	14792200	1 44.5%
32-Cods, hakes, haddocks,...	2	4597979	3 13.3%	3564700	3 10.7%
39-Misc. marine fishes	3	5211243	2 15.0%	3789266	2 11.4%
34-Jacks, mullets, sauries,...	4	2861077	5 8.3%	1243820	6 3.7%
36-Tunas,bonitos,billfishes,..	5	1829991	7 5.3%	1129738	7 3.4%
33-Redfishes,basses,congers,..	6	2337875	6 6.8%	1879440	5 5.7%
37-Mack.,snoeks,cutlassfishes	7	3360786	4 9.7%	2445800	4 7.4%
45-Shrimps, prawns, etc.	8	821421	9 2.4%	572200	9 1.7%
57-Squid,cuttlefish,octopuses	9	1154285	8 3.3%	765160	8 2.3%
42-Sea-spiders, crabs, etc.	10	588121	10 1.7%	448110	11 1.4%
56-Clams, cockles, arkshells..	11	472478	13 1.4%	419400	13 1.3%
23-Salmons, trouts, smelts,...	12	562141	11 1.6%	425400	12 1.3%
54-Mussels	13	215675	17 0.6%	310800	14 0.9%
53-Oysters	14	525230	12 1.5%	305600	15 0.9%
55-Scallops, pectens, etc.	15	135422	18 0.4%	26900	21 0.1%
31-Flounders,halibuts,soles,..	16	470284	14 1.4%	567500	10 1.7%
58-Misc. marine molluscs	17	228044	16 0.7%	230200	16 0.7%
38-Sharks, rays, chimaeras,...	18	240002	15 0.7%	181230	17 0.5%
25-Misc. diadromous fishes	19	28282	21 0.1%	37300	19 0.1%
24-Shads, etc.	20	31921	20 0.1%	25500	22 0.1%
52-Abalones,winkles,conchs,...	21	63865	19 0.2%	31300	20 0.1%
43-Lobsters,spinyrock lobsters	22	11669	23 0.0%	13500	24 0.0%
47-Misc. marine crustaceans	23	9643	24 0.0%	14500	23 0.0%
44-Squat-lobsters	24	12296	22 0.0%	40400	18 0.1%
22-River eels	25	1397	26 0.0%	900	25 0.0%
46-Krill,planct. crustaceans..	26	3181	25 0.0%	0	26 0.0%
TOTALS		34641590	100.0%	33260864	100.0%

Graphical presentations of time series for each species group, following the ranking order of Table 1.3 (ISSCAAP species group totals ranked by 1990 catches) are given below. Each plot consists of a line graph and explanatory remarks referring to a combination of country-species-area. Additional statistics, in percentage form, is provided for measuring the relative fluctuation of a time series and its linear trend.



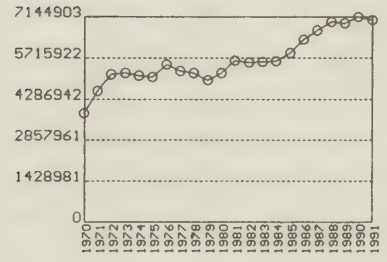
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....35-Herrings,sardines,anchovies
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 13.93 %
Rank..... 1 of 28 based on:1990
Percent to total..... 29.05 % , Cumulative: 29.05 %



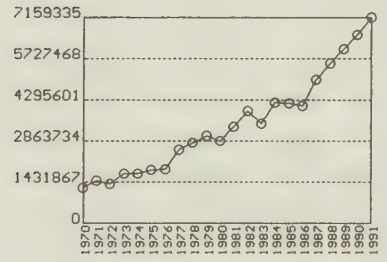
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....32-Cods, hakes, haddocks,...
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 10.72 %
Rank..... 2 of 28 based on:1990
Percent to total..... 13.81 % , Cumulative: 42.87 %



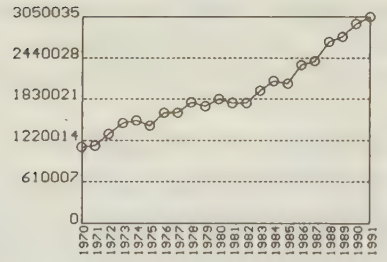
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....39-Misc. marine fishes
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 7.62 %
Rank..... 3 of 28 based on:1990
Percent to total..... 13.56 % , Cumulative: 56.43 %



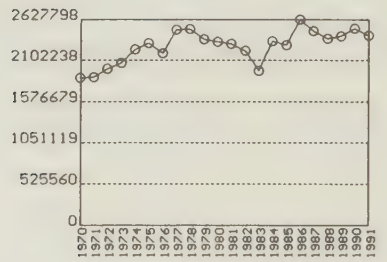
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....34-Jacks, mullets, sauries,...
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 26.50 %
Rank..... 4 of 28 based on:1990
Percent to total..... 12.45 % , Cumulative: 68.88 %



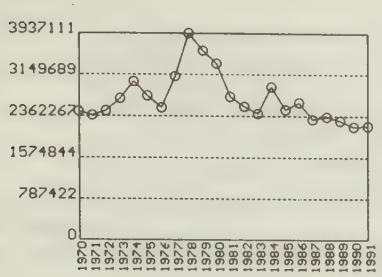
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....36-Tunas,bonitos,billfishes,..
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 15.01 %
Rank..... 5 of 28 based on:1990
Percent to total..... 5.60 % , Cumulative: 74.48 %



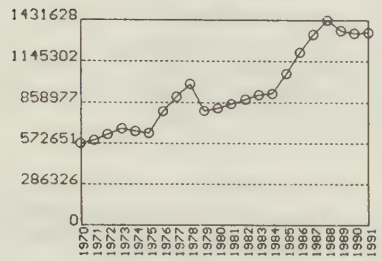
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....33-Redfishes,basses,congers,..
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 3.31 %
Rank..... 6 of 28 based on:1990
Percent to total..... 4.77 % , Cumulative: 79.25 %



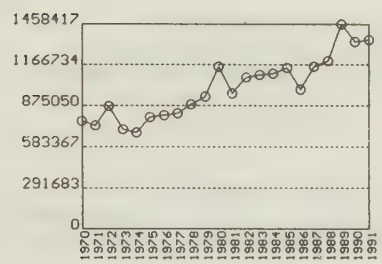
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....37-Mack.,snoeks,cutlassfishes
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... -3.05 %
Rank..... 7 of 28 based on:1990
Percent to total..... 4.12 % , Cumulative: 83.37 %



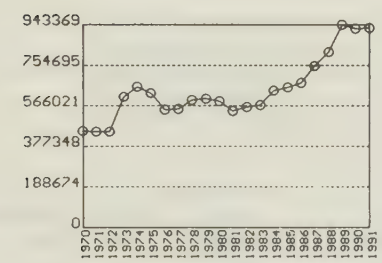
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....45-Shrimps, prawns, etc.
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 15.02 %
Rank..... 8 of 28 based on:1990
Percent to total..... 2.55 % , Cumulative: 85.92 %



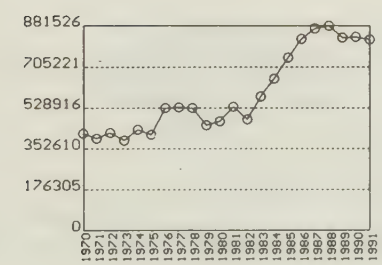
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....57-Squid,cuttlefish,octopuses
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 10.94 %
Rank..... 9 of 28 based on:1990
Percent to total..... 2.53 % , Cumulative: 88.45 %



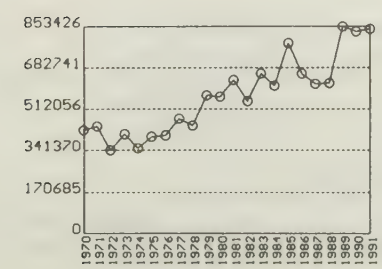
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....42-Sea-spiders, crabs, etc.
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 10.41 %
Rank..... 10 of 28 based on:1990
Percent to total..... 1.76 % , Cumulative: 90.21 %



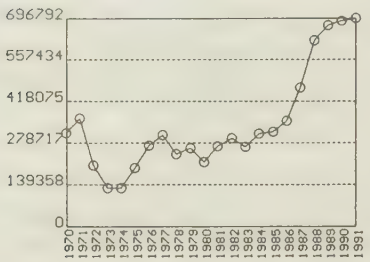
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....56-Clams, cockles, arkshells..
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 14.84 %
Rank..... 11 of 28 based on:1990
Percent to total..... 1.59 % , Cumulative: 91.79 %



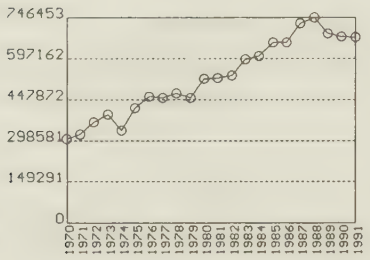
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....23-Salmons, trouts, smelts,...
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 13.93 %
Rank..... 12 of 28 based on:1990
Percent to total..... 1.58 % , Cumulative: 93.38 %



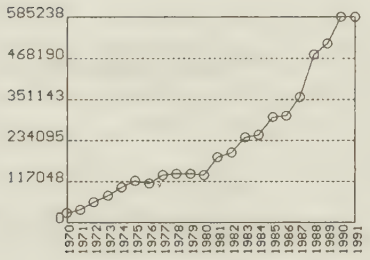
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....54-Mussels
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 20.93 %
Rank..... 13 of 28 based on:1990
Percent to total..... 1.31 % , Cumulative: 94.68 %



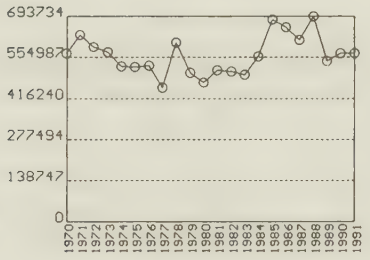
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....53-Oysters
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 13.71 %
Rank..... 14 of 28 based on:1990
Percent to total..... 1.28 % , Cumulative: 95.97 %



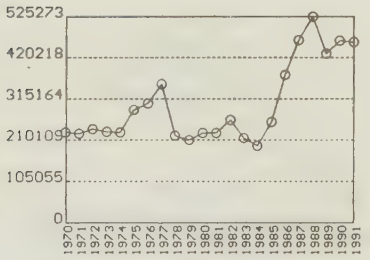
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....55-Scallops, pectens, etc.
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 38.05 %
Rank..... 15 of 28 based on:1990
Percent to total..... 1.11 % , Cumulative: 97.08 %



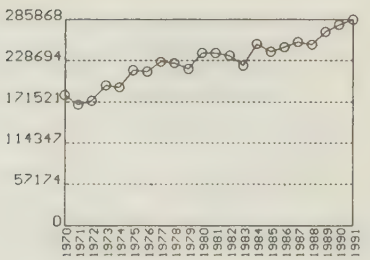
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....31-Flounders,halibuts,soles,..
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 1.45 %
Rank..... 16 of 28 based on:1990
Percent to total..... 1.08 % , Cumulative: 98.15 %



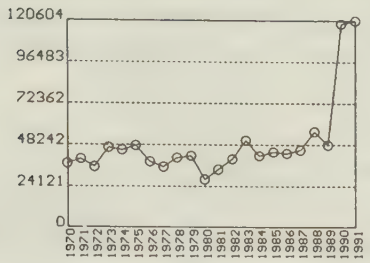
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....58-Misc. marine molluscs
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 12.83 %
Rank..... 17 of 28 based on:1990
Percent to total..... 0.88 % , Cumulative: 99.03 %



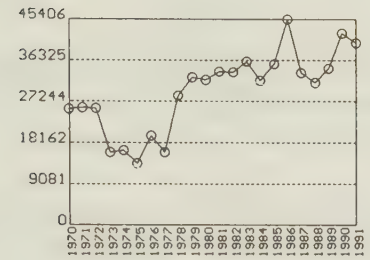
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....38-Sharks, rays, chimaeras,...
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 7.27 %
Rank..... 18 of 28 based on:1990
Percent to total..... 0.53 % , Cumulative: 99.56 %



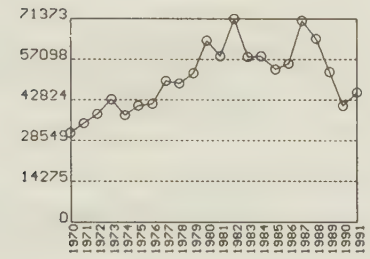
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....25-Misc. diadromous fishes
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 14.89 %
Rank..... 19 of 28 based on:1990
Percent to total..... 0.23 % , Cumulative: 99.79 %



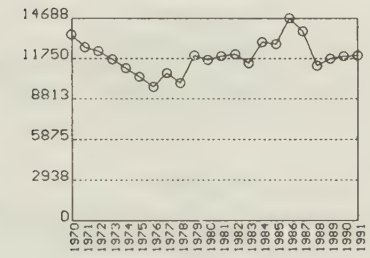
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....24-Shads, etc.
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 12.50 %
Rank..... 20 of 28 based on:1990
Percent to total..... 0.08 % , Cumulative: 99.87 %



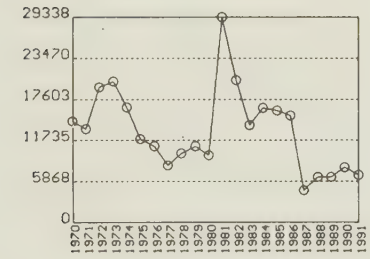
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....52-Abalones,winkles,conchs,...
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 7.26 %
Rank..... 21 of 28 based on:1990
Percent to total..... 0.08 % , Cumulative: 99.95 %



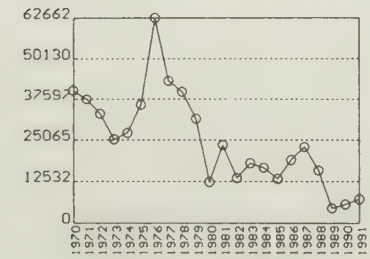
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....43-Lobsters,spinyrock lobsters
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 1.21 %
Rank..... 22 of 28 based on:1990
Percent to total..... 0.02 % , Cumulative: 99.97 %



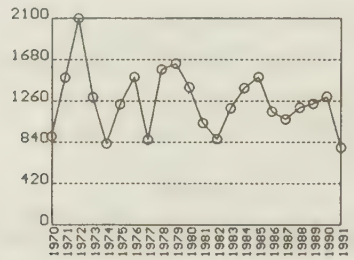
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....47-Misc. marine crustaceans
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -9.55 %
Rank..... 23 of 28 based on:1990
Percent to total..... 0.01 % , Cumulative: 99.99 %



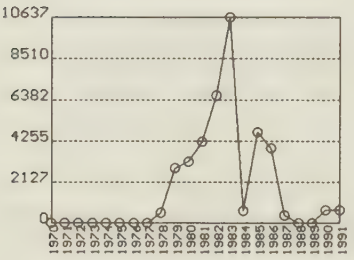
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....44-Squat-lobsters
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 7 %
Trend.....-23.36 %
Rank..... 24 of 28 based on:1990
Percent to total..... 0.01 % , Cumulative:100.00 %



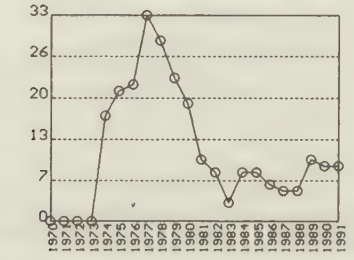
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....22-River eels
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -3.29 %
Rank..... 25 of 28 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



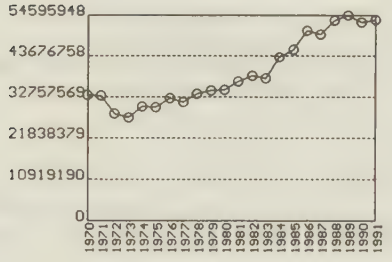
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....46-Krill,planct. crustaceans..
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 20.48 %
Rank..... 26 of 28 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....21-Sturgeons, paddlefishes,...
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... -3.57 %
Rank..... 27 of 28 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF ALL SPECIES GROUPS
Area.....PACIFIC OCEAN
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 11.76 %
Rank..... 28 of 28 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

Of significance are some major shifts that occurred within the top two species groups listed in Table 1.3. These refer to herrings, sardines, etc. (ISSCAAP group 35) and cods, hakes, etc. (ISSCAAP group 32) and are indicated by Tables 1.5 - 1.8.

Tables 1.5 and 1.6 indicate that in ISSCAAP group 35 (herrings, sardines, anchovies, etc.), the most notable shifts in production were observed for Japanese pilchard (17th with 0.1% in 1970, 2nd with 29.3% in 1980 and 1st with 30.7% in 1990). South American pilchard followed the same increasing pattern (19th with 0.1% in 1970, 1st with 36.7% in 1980 and 2nd with 27.8% in 1990). Peruvian anchovy dropped from top position in 1970 (88.3%) to 3rd position in 1980 (9.3%) and in 1990 it remained 3rd with 24.6%.

Tables 1.7 and 1.8 indicate that in ISSCAAP group 32 (cods, hakes, haddocks, etc.), the most notable shifts in production were observed for blue grenadier which rose from 8th position with almost 0% in 1970 to 3rd position with 5.4% in 1990.

Of particular interest are the trends of miscellaneous marine fish in the Pacific Ocean. These are illustrated by Tables 1.9 and 1.10 and followed by plots of catches in each of the seven major areas.

Table 1.5

PACIFIC OCEAN

Ranking order and proportions of catches in ISSCAAP group 35 (herrings, sardines, anchovies, etc.), in 1990.

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Japanese pilchard	1	4690546	30.7 %	Rising
South American pilchard	2	4253718	27.8 %	Rising
Anchoveta(=Peruvian anchovy)	3	3771577	24.6 %	Declining
Japanese anchovy	4	482131	3.2 %	Stable (-)
California pilchard	5	398699	2.6 %	Rising
Araucanian herring	6	298700	2.0 %	Rising
Sardinellas nei	7	266869	1.7 %	Rising
Stolephorus anchovies	8	212858	1.4 %	Rising
Pacific herring	9	198560	1.3 %	Declining
Goldstripe sardinella	10	121596	0.8 %	Rising
Bali sardinella	11	103806	0.7 %	Rising
Clupeoids nei	12	102116	0.7 %	Rising
Pacific anchoveta	13	99281	0.7 %	Rising
Anchovies nei	14	92148	0.6 %	Rising
Deepbody thread herring	15	75667	0.5 %	Rising
Red-eye round herring	16	51950	0.3 %	Stable (-)
Rainbow sardine	17	36028	0.2 %	Stable (-)
Wolf-herrings	18	26014	0.2 %	Stable (-)
Pacific menhaden	19	7571	0.1 %	Declining
Californian anchovy	20	6043	0.0 %	Stable (-)
Japanese sardinella	21	4205	0.0 %	Rising
Dorab wolf-herring	22	3987	0.0 %	Rising
Silver-stripe round herring	23	551	0.0 %	Declining
Indo-Pacific tarpon	24	298	0.0 %	Declining
Slender rainbow sardine	25	230	0.0 %	Declining
Bluestripe herring	26	21	0.0 %	Rising
Ladyfish	27	0	0.0 %	Declining
TOTAL HERRINGS, SARDINES, ETC.		15305170	100.0 %	Rising

Proportion coming from declining catches.....	26.0 %
from stable catches.....	3.9 %
from rising catches.....	70.1 %

Table 1.6

PACIFIC OCEAN

Comparison of ranking order and proportions of catches in ISSCAAP group 35 (herrings, sardines, anchovies, etc.), in 1990, 1980 and 1970.

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Japanese pilchard	1	2595315	2 29.3%	16900	17 0.1%
South American pilchard	2	3253365	1 36.7%	11400	19 0.1%
Anchoveta(=Peruvian anchovy)	3	822818	3 9.3%	13059900	1 88.3%
Japanese anchovy	4	320261	6 3.6%	419500	3 2.8%
California pilchard	5	328096	5 3.7%	35500	9 0.2%
Araucanian herring	6	33319	16 0.4%	57200	8 0.4%
Sardinellas nei	7	222017	7 2.5%	114700	4 0.8%
Stolephorus anchovies	8	161359	10 1.8%	113200	5 0.8%
Pacific herring	9	202584	8 2.3%	581800	2 3.9%
Goldstripe sardinella	10	87591	11 1.0%	25200	14 0.2%
Bali sardinella	11	47283	13 0.5%	17400	16 0.1%
Clupeoids nei	12	82349	12 0.9%	72800	7 0.5%
Pacific anchoveta	13	171916	9 1.9%	28900	12 0.2%
Anchovies nei	14	20618	18 0.2%	14300	18 0.1%
Deepbody thread herring	15	23329	17 0.3%	6900	21 0.1%
Red-eye round herring	16	41897	14 0.5%	33400	11 0.2%
Rainbow sardine	17	40244	15 0.5%	33600	10 0.2%
Wolf-herrings	18	16139	19 0.2%	26100	13 0.2%
Pacific menhaden	19	12610	20 0.1%	20400	15 0.1%
Californian anchovy	20	374069	4 4.2%	92600	6 0.6%
Japanese sardinella	21	5102	21 0.1%	0	27 0.0%
Dorab wolf-herring	22	2415	22 0.0%	0	24 0.0%
Silver-stripe round herring	23	1893	23 0.0%	9600	20 0.1%
Indo-Pacific tarpon	24	107	25 0.0%	100	23 0.0%
Slender rainbow sardine	25	560	24 0.0%	800	22 0.0%
Bluestripe herring	26	7	26 0.0%	0	25 0.0%
Ladyfish	27	0	27 0.0%	0	26 0.0%
TOTALS		8867263	100.0%	14792200	100.0%

Table 1.7
PACIFIC OCEAN
Ranking order and proportions of catches in ISSCAAP group 32 in 1990.

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Alaska pollack(Walleye poll.)	1	5736109	78.8 %	Rising
Pacific cod	2	441567	6.1 %	Rising
Blue grenadier	3	391781	5.4 %	Sharp rise
South Pacific hake	4	224624	3.1 %	Stable (-)
North Pacific hake	5	184344	2.5 %	Stable (+)
Patagonian grenadier	6	128002	1.8 %	Sharp rise
Patagonian hake	7	52112	0.7 %	Rising
Southern blue whiting	8	46233	0.6 %	Rising
Saffron cod	9	32280	0.4 %	Stable (+)
Gadiformes nei	10	13753	0.2 %	Stable (+)
Southern hake	11	9672	0.1 %	Sharp rise
Moras	12	8180	0.1 %	Rising
New Zealand red cod	13	7203	0.1 %	Rising
Grenadiers	14	2209	0.0 %	Rising
TOTAL CODS, HAKES, ETC.		7278069	100.0 %	Rising

Proportion coming from declining catches.....	0.0 %
from stable catches.....	6.3 %
from rising catches.....	93.8 %

Table 1.8
PACIFIC OCEAN
Ranking order and proportions in ISSCAAP group 32 in 1990,1980 and 1970.

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Alaska pollack(Walleye poll.)	1	4020814	1 87.5%	3057300	1 85.8%
Pacific cod	2	144587	3 3.1%	185600	2 5.2%
Blue grenadier	3	27711	8 0.6%	100	8 0.0%
South Pacific hake	4	191438	2 4.2%	105500	4 3.0%
North Pacific hake	5	57086	4 1.2%	171300	3 4.8%
Patagonian grenadier	6	18361	9 0.4%	0	16 0.0%
Patagonian hake	7	36656	6 0.8%	0	9 0.0%
Southern blue whiting	8	12534	10 0.3%	0	14 0.0%
Saffron cod	9	33300	7 0.7%	19500	6 0.6%
Gadiformes nei	10	836	14 0.0%	0	13 0.0%
Southern hake	11	2554	12 0.1%	0	11 0.0%
Moras	12	45840	5 1.0%	0	10 0.0%
New Zealand red cod	13	3957	11 0.1%	900	7 0.0%
Grenadiers	14	2305	13 0.1%	0	12 0.0%
TOTALS		4597979	100.0%	3564700	100.0%

Table 1.9

PACIFIC OCEAN

Ranking order and proportions of 1990 catches of miscellaneous marine fish by major area.

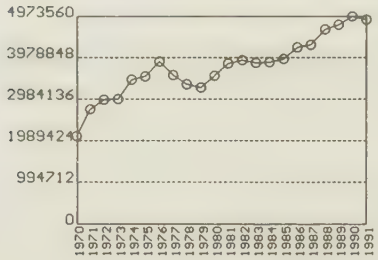
AREA	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Pacific, Northwest	1	4973560	69.6 %	Rising
Pacific, Western Central	2	1684587	23.6 %	Stable (+)
Pacific, Southeast	3	202732	2.8 %	Rising
Pacific, Eastern Central	4	173669	2.4 %	Stable (+)
Pacific, Northeast	5	90763	1.3 %	Rising
Pacific, Southwest	6	19592	0.3 %	Rising
Pacific, Antarctic	7	0	0.0 %	Declining
PACIFIC OCEAN - TOTAL		7144903	100.0 %	Rising

Table 1.10

PACIFIC OCEAN

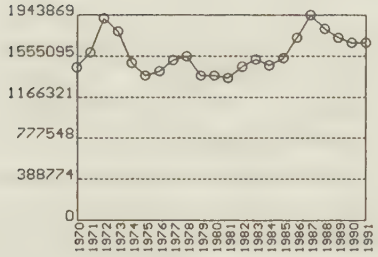
Comparison of ranking order and proportions of catches of miscellaneous marine fish by major area in 1990, 1980 and 1970.

AREA	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Pacific, Northwest	1	3551473	1 68.2%	2096266	1 55.3%
Pacific, Western Central	2	1376450	2 26.4%	1454400	2 38.4%
Pacific, Southeast	3	72741	4 1.4%	45000	5 1.2%
Pacific, Eastern Central	4	169806	3 3.3%	117600	3 3.1%
Pacific, Northeast	5	24483	5 0.5%	69100	4 1.8%
Pacific, Southwest	6	16290	6 0.3%	6900	6 0.2%
Pacific, Antarctic	7	0	7 0.0%	0	7 0.0%
TOTALS		5211243	100.0%	3789266	100.0%



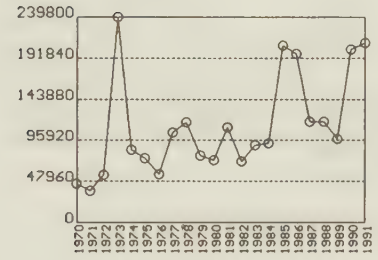
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Northwest
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 9.65 %
Rank..... 1 of 8 based on:1990
Percent to total..... 69.61 % , Cumulative: 69.61 %



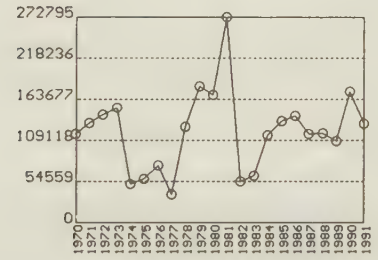
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Western Central
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 1.80 %
Rank..... 2 of 8 based on:1990
Percent to total..... 23.58 % , Cumulative: 93.19 %



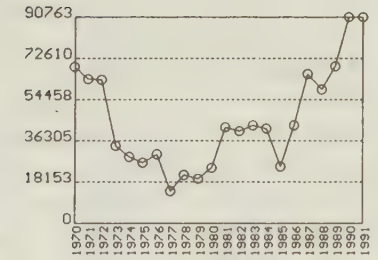
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Southeast
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 14.77 %
Rank..... 3 of 8 based on:1990
Percent to total..... 2.84 % , Cumulative: 96.02 %



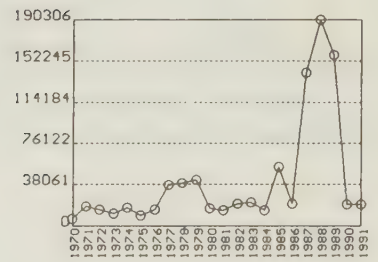
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Eastern Central
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 3.63 %
Rank..... 4 of 8 based on:1990
Percent to total..... 2.43 % , Cumulative: 98.46 %



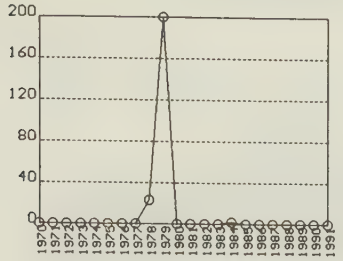
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Northeast
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 10.52 %
Rank..... 5 of 8 based on:1990
Percent to total..... 1.27 % , Cumulative: 99.73 %



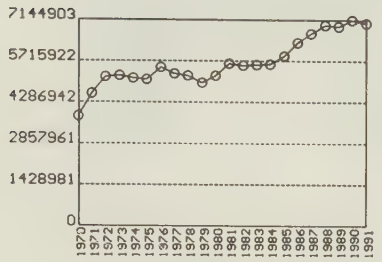
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Southwest
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 34.69 %
Rank..... 6 of 8 based on:1990
Percent to total..... 0.27 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....Pacific, Antarctic
Unit.....Metric tons

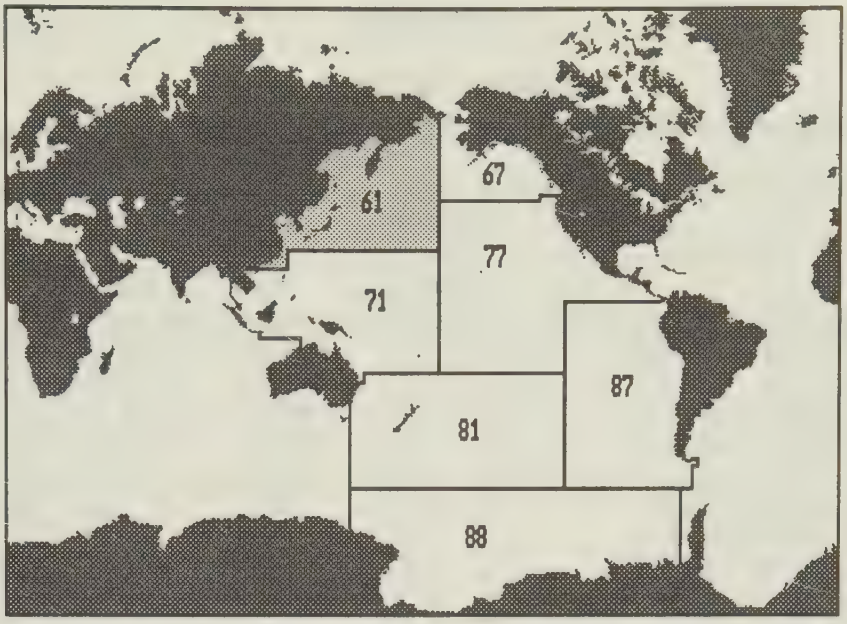
Fluctuation..... 5 %
Trend.....-13.55 %
Rank..... 7 of 8 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....MISCELLANEOUS MARINE FISH
Area.....PACIFIC OCEAN - TOTAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 7.62 %
Rank..... 8 of 8 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2. PACIFIC, NORTHWEST (Area 61)



Major producers of fish, crustaceans and molluscs (1990 ranking): Japan:41.51%, USSR:21.79%, China:20.85%, Korea Rep:9.94%, Other nei A:4.24%, Poland:1.09%, Hong Kong:0.58%, Macau:0.01%.

Major species and percentages based on 1990 ranking: Japanese pilchard:22.79%, Alaska pollack(Walleye poll.):20.44%, Largehead hairtail:3.18%, Marine crabs nei:3.04%, Chub mackerel:2.97%, Pacific cupped oyster:2.89%, Japanese scallop:2.77%, Sea mussels nei:2.48%, Japanese anchovy:2.34%, Squids nei:2.29%, Pacific saury:2.12%, Scads:1.92%, Marine molluscs nei:1.82%, Filefishes:1.64%, Japanese flying squid:1.50%, Japanese(=Manila)clam:1.24%, Japanese Spanish mackerel:1.19%, Japanese jack mackerel:1.19%, Akiami paste shrimp:1.15%, Chum(=Keta=Dog)salmon:1.13%, Threadsail filefish:1.12%, Fleshy prawn:1.09%, Pacific cod:0.88%, Japanese amberjack:0.78%, Flatfishes nei:0.74%, Atka mackerel:0.73%, Clams nei:0.69%, Razor clams:0.68%, Skipjack tuna:0.68%, Natantian decapods nei:0.64%, Japanese scad:0.54%, Pacific herring:0.53%, Cocktail shrimp:0.47%, Sharks, rays, skates, etc:0.45%, Milkfish:0.44%, Clupeoids nei:0.41%, Pink(=Humpback)salmon:0.40%, Pomfrets, nei:0.40%, OTHER SPECIES:8.20%.

2.1 Production of diadromous fish (ISSCAAP GROUPS 21-25).

Table 2.1.1

PACIFIC, NORTHWEST
Diadromous fish (ISSCAAP GROUPS 21-25), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Chum(=Keta=Dog)salmon	1	231591	47.2 %	Rising
Milkfish	2	90716	18.5 %	Rising
Pink(=Humpback)salmon	3	83369	17.0 %	Stable (+)
Coho(=Silver)salmon	4	26290	5.4 %	Rising
Elongate ilisha	5	24667	5.0 %	Rising
Sockeye(=Red)salmon	6	17004	3.5 %	Stable (-)
Chinese gizzard shad	7	10743	2.2 %	Rising
Masu(=cherry) salmon	8	1924	0.4 %	Declining
Salmonoids nei	9	1467	0.3 %	Rising
Chinook(=Spring=King)salmon	10	1254	0.3 %	Declining
Smelts nei	11	1065	0.2 %	Declining
Giant sea perch(=Barramundi)	12	167	0.0 %	Sharp rise
Whitefishes nei	13	0	0.0 %	Sharp decl
Rainbow trout	14	0	0.0 %	Sharp decl
TOTAL DIADROMOUS		490257	100.0 %	Rising

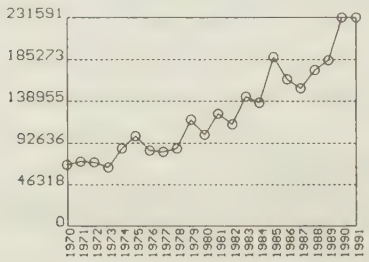
Proportion coming from declining catches.....	0.9 %
from stable catches.....	20.5 %
from rising catches.....	78.7 %

Major fishing countries ranked by 1990 production: Japan:50.34%, USSR:23.77%, Other nei A:18.50%, China:4.78%, Korea Rep:2.57%, Hong Kong:0.03%.

Table 2.1.2

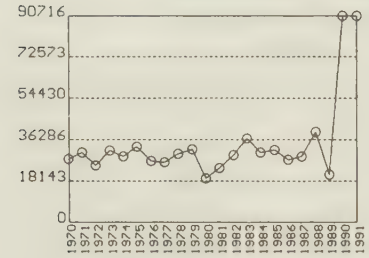
PACIFIC, NORTHWEST
Ranking order and proportions of diadromous species in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Chum(=Keta=Dog)salmon	1	102269	1 37.1%	69100	1 32.3%
Milkfish	2	19323	3 7.0%	27900	3 13.0%
Pink(=Humpback)salmon	3	97372	2 35.4%	56000	2 26.2%
Coho(=Silver)salmon	4	6120	7 2.2%	9900	6 4.6%
Elongate ilisha	5	18169	4 6.6%	12500	5 5.8%
Sockeye(=Red)salmon	6	9847	5 3.6%	22600	4 10.6%
Chinese gizzard shad	7	9668	6 3.5%	7900	7 3.7%
Masu(=cherry) salmon	8	2719	10 1.0%	0	12 0.0%
Salmonoids nei	9	4069	8 1.5%	1500	10 0.7%
Chinook(=Spring=King)salmon	10	3541	9 1.3%	3000	9 1.4%
Smelts nei	11	2280	11 0.8%	3600	8 1.7%
Giant sea perch(=Barramundi)	12	0	13 0.0%	0	13 0.0%
Whitefishes nei	13	6	12 0.0%	100	11 0.1%
Rainbow trout	14	0	14 0.0%	0	14 0.0%
TOTALS		275383	100.0%	214100	100.0%



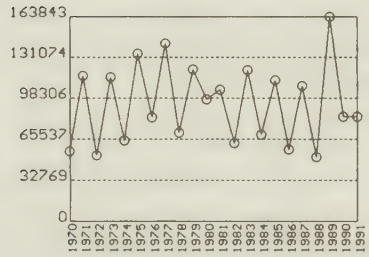
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chum(=Keta=Dog)salmon
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 20.47 %
Rank..... 1 of 12 based on:1990
Percent to total..... 47.24 % , Cumulative: 47.24 %



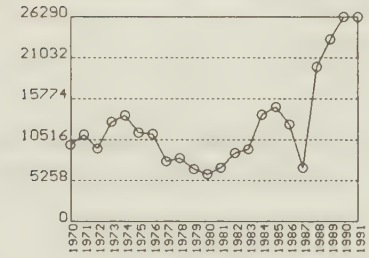
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Milkfish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 14.57 %
Rank..... 2 of 12 based on:1990
Percent to total..... 18.50 % , Cumulative: 65.74 %



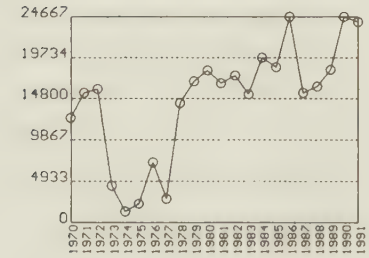
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pink(=Humpback)salmon
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 47 %
Trend..... 0.93 %
Rank..... 3 of 12 based on:1990
Percent to total..... 17.01 % , Cumulative: 82.75 %



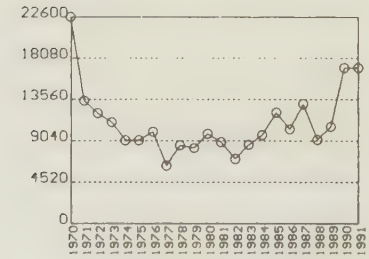
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Coho(=Silver)salmon
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 15.46 %
Rank..... 4 of 12 based on:1990
Percent to total..... 5.36 % , Cumulative: 88.11 %



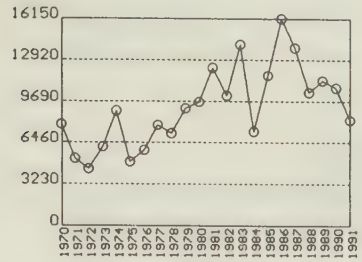
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Elongate ilisha
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 17.38 %
Rank..... 5 of 12 based on:1990
Percent to total..... 5.03 % , Cumulative: 93.14 %



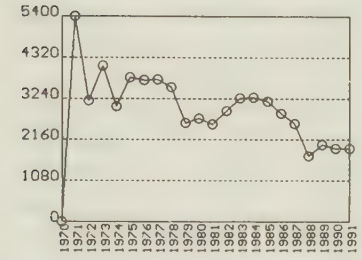
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sockeye(=Red)salmon
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... -0.01 %
Rank..... 6 of 12 based on:1990
Percent to total..... 3.47 % , Cumulative: 96.61 %



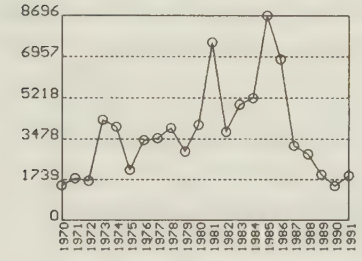
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chinese gizzard shad
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 12.21 %
Rank..... 7 of 12 based on:1990
Percent to total..... 2.19 % , Cumulative: 98.80 %



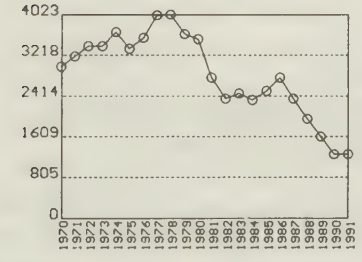
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Masu(=cherry) salmon
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -7.20 %
Rank..... 8 of 12 based on:1990
Percent to total..... 0.39 % , Cumulative: 99.19 %



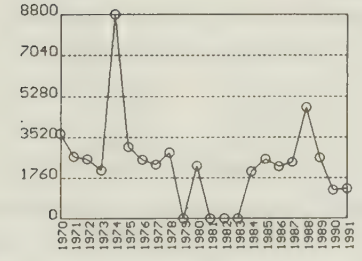
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Salmonoids nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 5.13 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.30 % , Cumulative: 99.49 %



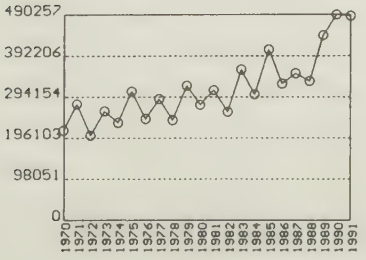
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chinook(=Spring=King)salmon
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend.....-12.66 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.26 % , Cumulative: 99.75 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER DIADROMOUS
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend.....-12.24 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.25 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL DIADROMOUS
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... 11.69 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.2 Production of flounders, halibuts, soles, etc. (ISSCAAP GROUP 31).

Table 2.2.1

PACIFIC, NORTHWEST
Flounders, halibuts, soles, etc. (ISSCAAP GROUP 31), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Flatfishes nei	1	152613	77.6 %	Declining
Bastard halibut	2	15055	7.7 %	Stable (+)
Yellow striped flounder	3	13204	6.7 %	Stable (-)
Kamchatka flounder	4	11641	5.9 %	Stable (+)
Tonguefishes nei	5	4194	2.1 %	Rising
TOTAL FLOUNDERS, SOLES, ETC.		196707	100.0 %	Declining

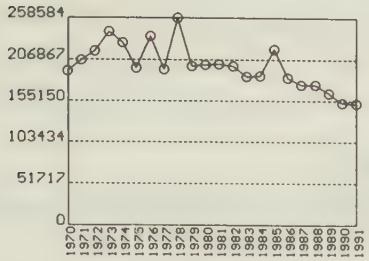
Proportion coming from declining catches.....	77.6 %
from stable catches.....	20.3 %
from rising catches.....	2.1 %

Major fishing countries ranked by 1990 production: USSR:48.59%, Japan:40.47%, Korea Rep:10.47%, Hong Kong:0.33%, Other nei A:0.13%.

Table 2.2.2

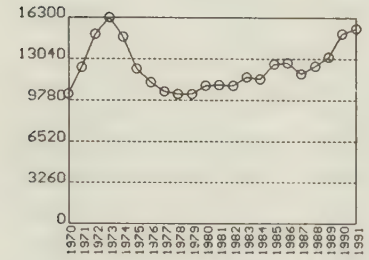
PACIFIC, NORTHWEST
Ranking order and proportions of flounders, halibuts, soles, etc., (ISSCAAP GROUP 31), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Flatfishes nei	1	200168	1 75.5%	192100	1 74.5%
Bastard halibut	2	10976	4 4.1%	10300	4 4.0%
Yellow striped flounder	3	29466	2 11.1%	21600	2 8.4%
Kamchatka flounder	4	13510	3 5.1%	2800	9 1.1%
Tonguefishes nei	5	4372	5 1.7%	3200	8 1.2%
TOTALS		265236	100.0%	258000	100.0%



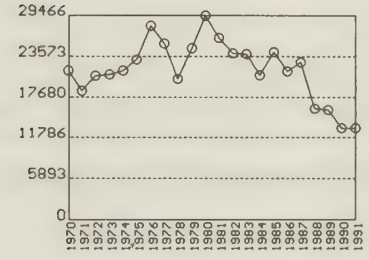
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flatfishes nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -5.11 %
Rank..... 1 of 6 based on:1990
Percent to total..... 77.58 % , Cumulative: 77.58 %



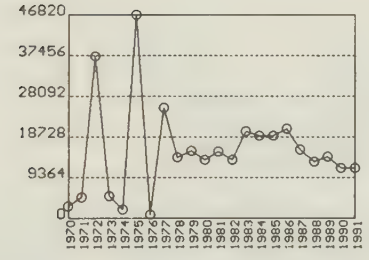
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bastard halibut
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 1.06 %
Rank..... 2 of 6 based on:1990
Percent to total..... 7.65 % , Cumulative: 85.24 %



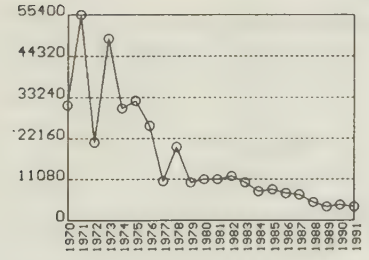
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellow striped flounder
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... -4.52 %
Rank..... 3 of 6 based on:1990
Percent to total..... 6.71 % , Cumulative: 91.95 %



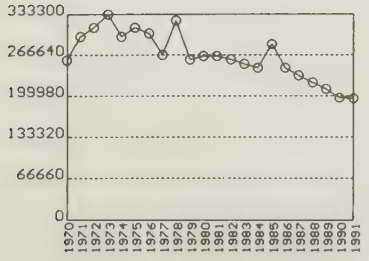
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Kamchatka flounder
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... 0.95 %
Rank..... 4 of 6 based on:1990
Percent to total..... 5.92 % , Cumulative: 97.87 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER FLOUNDERS, SOLES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend.....-38.10 %
Rank..... 5 of 6 based on:1990
Percent to total..... 2.13 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL FLOUNDERS, SOLES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -6.55 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.3 Production of cods, hakes, haddocks, etc. (ISSCAAP GROUP 32).

Table 2.3.1

ATLANTIC NORTHWEST
Cods, hakes, haddocks, etc. (ISSCAAP GROUP 32), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Alaska pollack(Walleye poll.)	1	4207090	95.0 %	Rising
Pacific cod	2	180972	4.1 %	Rising
Saffron cod	3	32280	0.7 %	Stable (+)
Moras	4	8180	0.2 %	Rising
Grenadiers	5	2209	0.1 %	Rising
TOTAL CODS, HAKES, ETC.		4430731	100.0 %	Rising

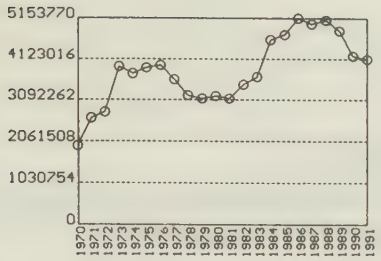
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.7 %
from rising catches.....	99.3 %

Major fishing countries ranked by 1990 production: USSR:68.41%, Japan:21.00%, Korea Rep:5.55%, Poland:5.04%.

Table 2.3.2

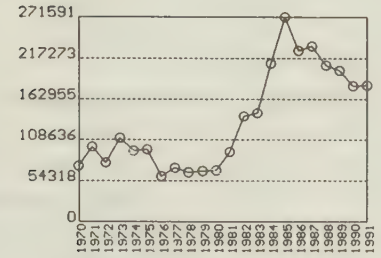
PACIFIC, NORTHWEST
Ranking order and proportions of cods, hakes, etc. (ISSCAAP GROUP 32), in 1990, 1980 and 1970.

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Alaska pollack(Walleye poll.)	1	3193325	1 95.5%	1959300	1 94.3%
Pacific cod	2	67827	2 2.0%	73800	2 3.6%
Saffron cod	3	33300	4 1.0%	19500	4 0.9%
Moras	4	45840	3 1.4%	0	5 0.0%
Grenadiers	5	2300	5 0.1%	0	6 0.0%
TOTALS		3342592	100.0%	2077100	100.0%



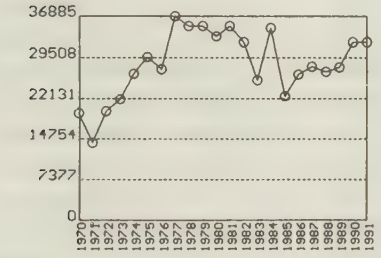
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Alaska pollack(Walleye poll.)
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 9.04 %
Rank..... 1 of 6 based on:1990
Percent to total..... 94.95 % , Cumulative: 94.95 %



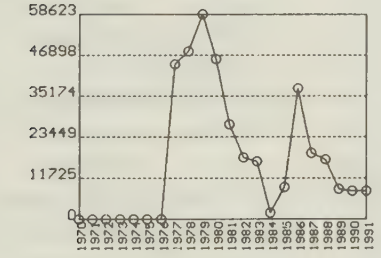
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific cod
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 20.64 %
Rank..... 2 of 6 based on:1990
Percent to total..... 4.08 % , Cumulative: 99.04 %



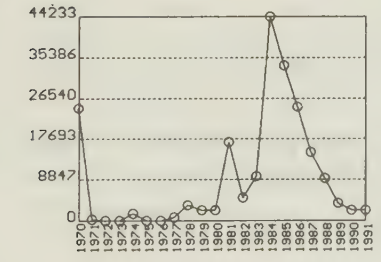
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Saffron cod
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 4.82 %
Rank..... 3 of 6 based on:1990
Percent to total..... 0.73 % , Cumulative: 99.77 %



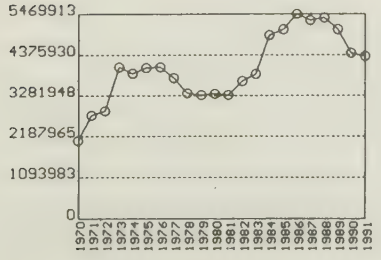
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Moras
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 10.32 %
Rank..... 4 of 6 based on:1990
Percent to total..... 0.18 % , Cumulative: 99.95 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CODS, HAKES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 18.92 %
Rank..... 5 of 6 based on:1990
Percent to total..... 0.05 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CODS, HAKES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 9.43 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.4 Production of redfishes, basses, congers, etc. (ISSCAAP GROUP 33).

Table 2.4.1

PACIFIC, NORTHWEST
Top 22 species of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Filefishes	1	337741	24.9 %	Rising
Threadsail filefish	2	230252	17.0 %	Rising
Atka mackerel	3	149607	11.0 %	Declining
Croakers, drums nei	4	77752	5.7 %	Rising
Pacific sandlance	5	75545	5.6 %	Declining
Silver seabream	6	66863	4.9 %	Rising
Gobies nei	7	44791	3.3 %	Rising
Yellow croaker	8	29436	2.2 %	Declining
Porgies, seabreams, nei	9	26487	2.0 %	Stable (-)
Greater yellow croaker	10	25443	1.9 %	Declining
Lesser yellow croaker	11	23459	1.7 %	Stable (+)
Whitespotted conger	12	22053	1.6 %	Rising
Threadfin breams	13	20752	1.5 %	Rising
Bigeyes nei	14	18303	1.4 %	Rising
Greater lizardfish	15	17457	1.3 %	Declining
Daggertooth pike-conger	16	17025	1.3 %	Declining
Large yellow croaker	17	15091	1.1 %	Stable (-)
Pacific rudderfish	18	14016	1.0 %	Rising
Snappers, jobfishes, nei	19	12784	0.9 %	Stable (+)
Golden threadfin bream	20	12511	0.9 %	Stable (-)
Lizardfishes nei	21	12377	0.9 %	Rising
Moonfish	22	10286	0.8 %	Rising
OTHER REDFISHES, BASSES, ETC.	23	98720	7.3 %	Declining
TOTAL REDFISHES, BASSES, ETC.		1358751	100.0 %	Stable (+)

Proportion coming from declining catches.....	30.4 %
from stable catches.....	6.7 %
from rising catches.....	63.0 %

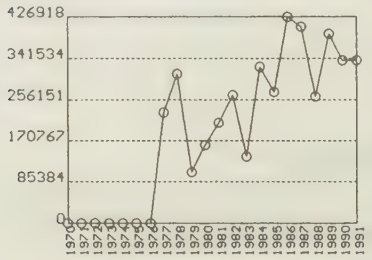
Major fishing countries ranked by 1990 production: Korea Rep:30.13%, China:28.42%, Japan:25.27%, Other nei A:6.64%, Hong Kong:5.76%, USSR:3.79%.

Table 2.4.2

PACIFIC, NORTHWEST

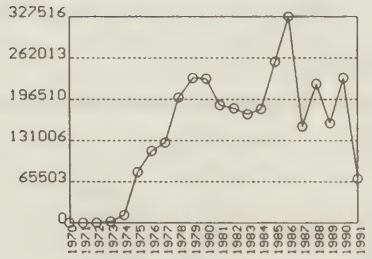
Ranking order and proportions of top 22 species of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Filefishes	1	161365	3 11.4%	0	50 0.0%
Threadsail filefish	2	229230	1 16.2%	0	53 0.0%
Atka mackerel	3	127483	4 9.0%	166200	2 15.1%
Croakers, drums nei	4	80436	6 5.7%	32000	8 2.9%
Pacific sandlance	5	201227	2 14.2%	227100	1 20.6%
Silver seabream	6	32012	12 2.3%	800	41 0.1%
Gobies nei	7	2930	38 0.2%	18100	13 1.6%
Yellow croaker	8	54824	8 3.9%	74500	4 6.8%
Porgies, seabreams, nei	9	31614	13 2.2%	52800	5 4.8%
Greater yellow croaker	10	86361	5 6.1%	158700	3 14.4%
Lesser yellow croaker	11	35957	10 2.5%	30400	9 2.8%
Whitespotted conger	12	9614	22 0.7%	5500	26 0.5%
Threadfin breams	13	16785	15 1.2%	13000	17 1.2%
Bigeyes nei	14	14328	19 1.0%	4500	28 0.4%
Greater lizardfish	15	45398	9 3.2%	38600	7 3.5%
Daggertooth pike-conger	16	32985	11 2.3%	30200	10 2.7%
Large yellow croaker	17	0	51 0.0%	23400	12 2.1%
Pacific rudderfish	18	5653	29 0.4%	12200	19 1.1%
Snappers, jobfishes, nei	19	8895	24 0.6%	5900	24 0.5%
Golden threadfin bream	20	6592	28 0.5%	4900	27 0.4%
Lizardfishes nei	21	7592	26 0.5%	2900	35 0.3%
Moonfish	22	4943	32 0.4%	1000	40 0.1%
TOTALS		1417435	100.0%	1103700	100.0%



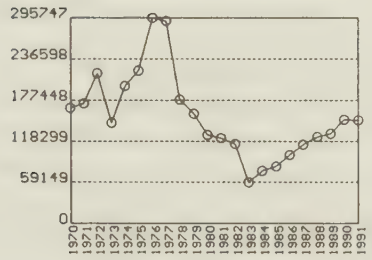
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Filefishes
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 38.37 %
Rank..... 1 of 24 based on:1990
Percent to total..... 24.86 % , Cumulative: 24.86 %



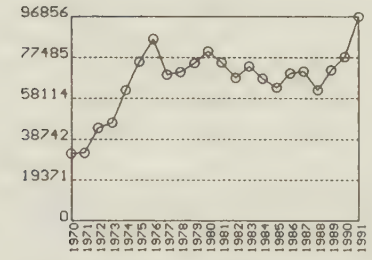
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Threadsail filefish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 24.52 %
Rank..... 2 of 24 based on:1990
Percent to total..... 16.95 % , Cumulative: 41.80 %



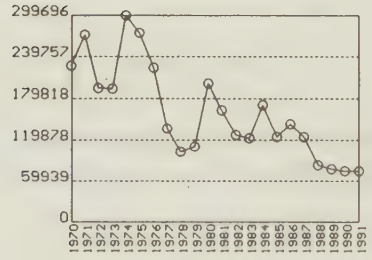
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Atka mackerel
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend.....-11.76 %
Rank..... 3 of 24 based on:1990
Percent to total..... 11.01 % , Cumulative: 52.81 %



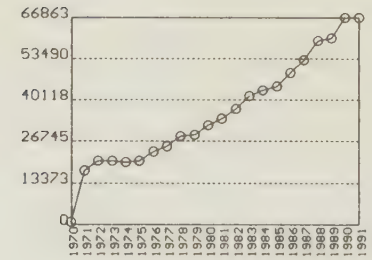
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Croakers, drums nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 8.11 %
Rank..... 4 of 24 based on:1990
Percent to total..... 5.72 % , Cumulative: 58.54 %



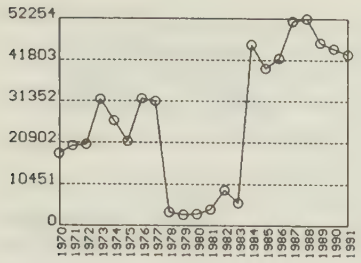
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific sandlance
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-18.27 %
Rank..... 5 of 24 based on:1990
Percent to total..... 5.56 % , Cumulative: 64.10 %



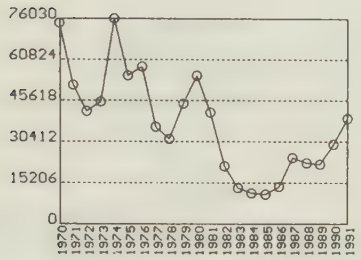
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Silver seabream
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 0 %
Trend..... 25.93 %
Rank..... 6 of 24 based on:1990
Percent to total..... 4.92 % , Cumulative: 69.02 %



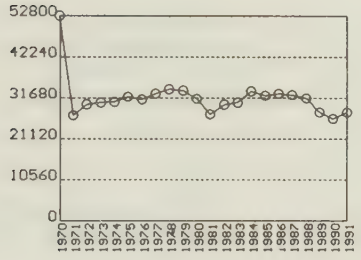
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Gobies nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 18.28 %
Rank..... 7 of 24 based on:1990
Percent to total..... 3.30 % , Cumulative: 72.31 %



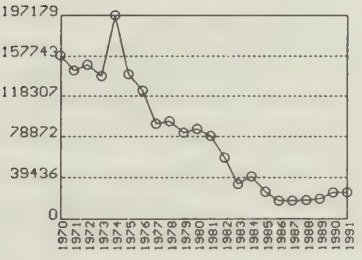
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellow croaker
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend.....-19.81 %
Rank..... 8 of 24 based on:1990
Percent to total..... 2.17 % , Cumulative: 74.48 %



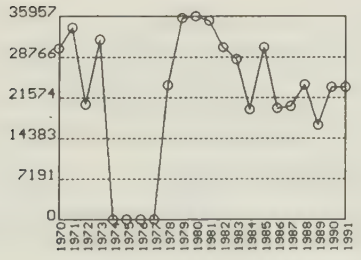
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Porgies, seabreams, nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... -3.34 %
Rank..... 9 of 24 based on:1990
Percent to total..... 1.95 % , Cumulative: 76.43 %



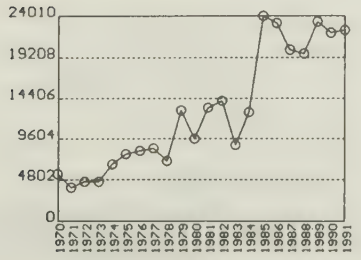
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Greater yellow croaker
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend.....-35.33 %
Rank..... 10 of 24 based on:1990
Percent to total..... 1.87 % , Cumulative: 78.30 %



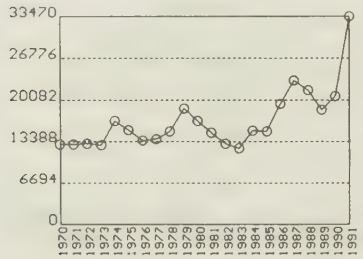
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Lesser yellow croaker
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 3.33 %
Rank..... 11 of 24 based on:1990
Percent to total..... 1.73 % , Cumulative: 80.03 %



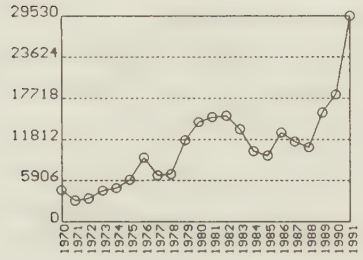
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Whitespotted conger
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 27.30 %
Rank..... 12 of 24 based on:1990
Percent to total..... 1.62 % , Cumulative: 81.65 %



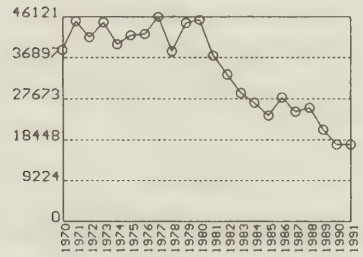
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Threadfin breams
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 10.86 %
Rank..... 13 of 24 based on:1990
Percent to total..... 1.53 % , Cumulative: 83.18 %



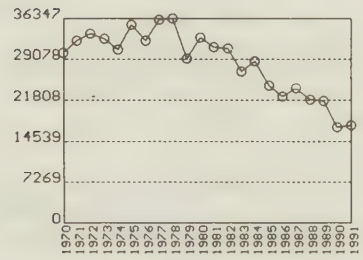
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeyes nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 24.85 %
Rank..... 14 of 24 based on:1990
Percent to total..... 1.35 % , Cumulative: 84.52 %



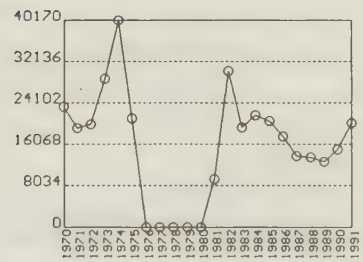
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Greater lizardfish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-13.56 %
Rank..... 15 of 24 based on:1990
Percent to total..... 1.28 % , Cumulative: 85.81 %



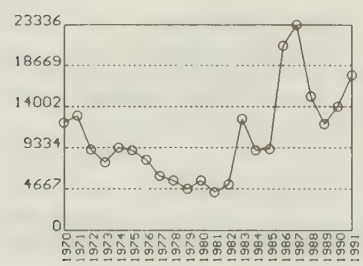
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Daggertooth pike-conger
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -9.12 %
Rank..... 16 of 24 based on:1990
Percent to total..... 1.25 % , Cumulative: 87.06 %



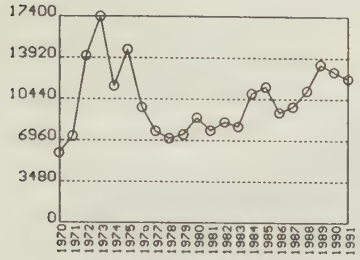
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Large yellow croaker
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... -4.32 %
Rank..... 17 of 24 based on:1990
Percent to total..... 1.11 % , Cumulative: 88.17 %



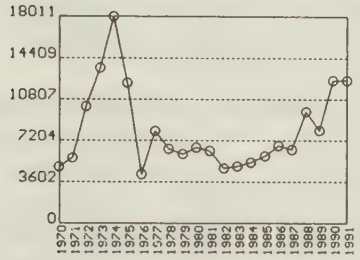
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific rudderfish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 12.54 %
Rank..... 18 of 24 based on:1990
Percent to total..... 1.03 % , Cumulative: 89.20 %



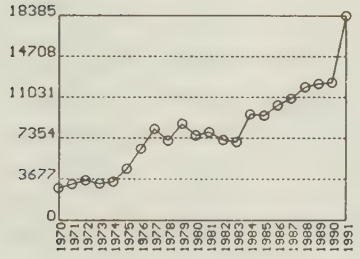
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Snappers, jobfishes, nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 1.80 %
Rank..... 19 of 24 based on:1990
Percent to total..... 0.94 % , Cumulative: 90.15 %



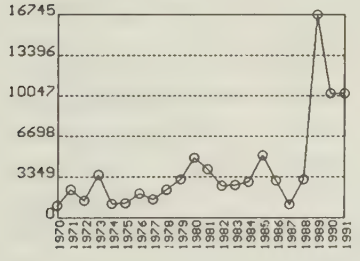
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Golden threadfin bream
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... -0.79 %
Rank..... 20 of 24 based on:1990
Percent to total..... 0.92 % , Cumulative: 91.07 %



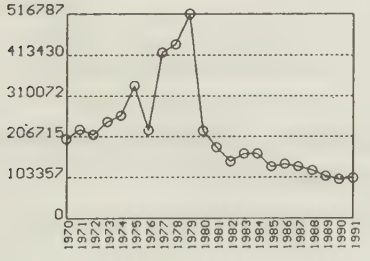
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Lizardfishes nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 23.90 %
Rank..... 21 of 24 based on:1990
Percent to total..... 0.91 % , Cumulative: 91.98 %



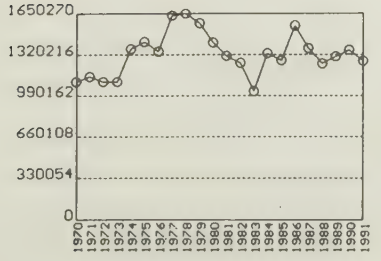
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Moonfish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 33.11 %
Rank..... 22 of 24 based on:1990
Percent to total..... 0.76 % , Cumulative: 92.73 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER REDFISHES, BASSES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend.....-15.54 %
Rank..... 23 of 24 based on:1990
Percent to total..... 7.26 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL REDFISHES, BASSES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 1.14 %
Rank..... 24 of 24 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.5 Production of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34).

Table 2.5.1

PACIFIC, NORTHWEST
Jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Pacific saury	1	435714	26.7 %	Stable (+)
Scads	2	394760	24.2 %	Rising
Japanese jack mackerel	3	245470	15.0 %	Stable (+)
Japanese amberjack	4	161106	9.9 %	Rising
Japanese scad	5	111231	6.8 %	Rising
Pomfrets, nei	6	83005	5.1 %	Rising
Amberjacks nei	7	57583	3.5 %	Stable (-)
Common dolphinfish	8	26388	1.6 %	Rising
Indian scad	9	24598	1.5 %	Sharp rise
Butterfishes, silver pomfrets	10	21238	1.3 %	Stable (+)
Silver pomfret	11	19021	1.2 %	Rising
Carangids nei	12	14428	0.9 %	Rising
Flathead grey mullet	13	12154	0.7 %	Stable (+)
Fourfinger threadfin	14	11690	0.7 %	Rising
Japanese flyingfish	15	8015	0.5 %	Stable (-)
Japanese halfbeak	16	1992	0.1 %	Rising
Jack and horse mackerels nei	17	1368	0.1 %	Sharp rise
Capelin	18	1344	0.1 %	Rising
Barracudas	19	1344	0.1 %	Sharp rise
Flyingfishes nei	20	693	0.0 %	Declining
Jacks, crevalles, nei	21	390	0.0 %	Declining
Cobia	22	381	0.0 %	Sharp rise
Torpedo scad	23	74	0.0 %	Sharp rise
TOTAL JACKS, MULLETS, ETC.		1633987	100.0 %	Rising

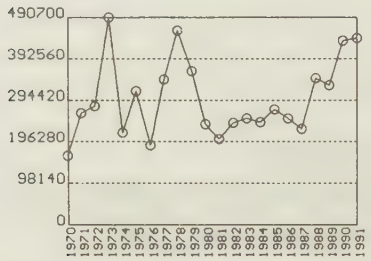
Proportion coming from declining catches.....	0.1 %
from stable catches.....	47.7 %
from rising catches.....	52.2 %

Major fishing countries ranked by 1990 production: Japan:54.70%, China:28.82%, Other nei A:6.75%, Korea Rep:4.75%, USSR:4.53%, Hong Kong:0.45%.

Table 2.5.2

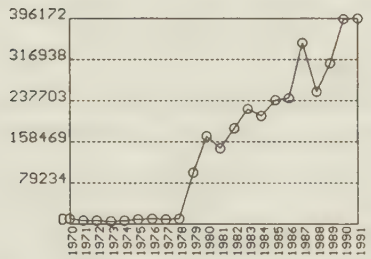
PACIFIC, NORTHWEST
Ranking order and proportions of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Pacific saury	1	238150	1 26.2%	162900	2 26.2%
Scads	2	169745	2 18.7%	10100	11 1.6%
Japanese jack mackerel	3	56742	5 6.2%	222100	1 35.7%
Japanese amberjack	4	149311	3 16.4%	43400	5 7.0%
Japanese scad	5	91313	4 10.1%	54000	4 8.7%
Pomfrets, nei	6	42773	7 4.7%	0	18 0.0%
Amberjacks nei	7	44091	6 4.9%	56600	3 9.1%
Common dolphinfish	8	14868	11 1.6%	11800	8 1.9%
Indian scad	9	0	20 0.0%	0	19 0.0%
Butterfishes, silver pomfrets	10	26796	9 3.0%	10600	9 1.7%
Silver pomfret	11	5344	14 0.6%	800	16 0.1%
Carangids nei	12	29206	8 3.2%	14900	7 2.4%
Flathead grey mullet	13	21564	10 2.4%	15900	6 2.6%
Fourfinger threadfin	14	5525	13 0.6%	1400	14 0.2%
Japanese flyingfish	15	7689	12 0.9%	10200	10 1.6%
Japanese halfbeak	16	1120	17 0.1%	200	17 0.0%
Jack and horse mackerels nei	17	0	23 0.0%	0	22 0.0%
Capelin	18	2193	15 0.2%	2300	13 0.4%
Barracudas	19	250	19 0.0%	0	23 0.0%
Flyingfishes nei	20	1068	18 0.1%	3300	12 0.5%
Jacks, crevalles, nei	21	1161	16 0.1%	900	15 0.1%
Cobia	22	0	21 0.0%	0	20 0.0%
Torpedo scad	23	0	22 0.0%	0	21 0.0%
TOTALS		908909	100.0%	621400	100.0%



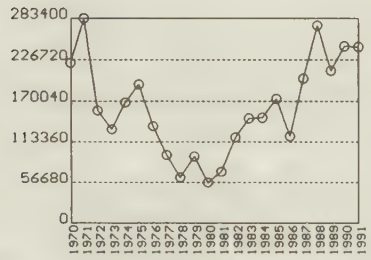
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific saury
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 17 %
Trend..... 3.85 %
Rank..... 1 of 12 based on:1990
Percent to total..... 26.67 % , Cumulative: 26.67 %



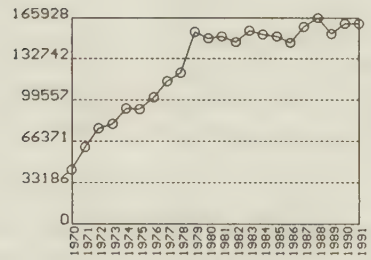
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Scads
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 47.80 %
Rank..... 2 of 12 based on:1990
Percent to total..... 24.16 % , Cumulative: 50.83 %



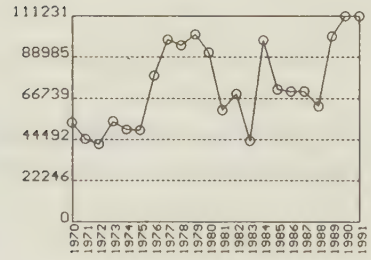
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese jack mackerel
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 4.49 %
Rank..... 3 of 12 based on:1990
Percent to total..... 15.02 % , Cumulative: 65.85 %



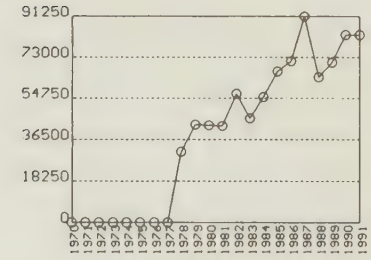
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese amberjack
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 14.40 %
Rank..... 4 of 12 based on:1990
Percent to total..... 9.86 % , Cumulative: 75.71 %



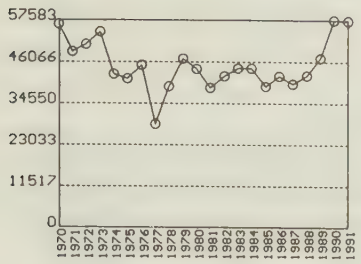
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese scad
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 9.63 %
Rank..... 5 of 12 based on:1990
Percent to total..... 6.81 % , Cumulative: 82.51 %



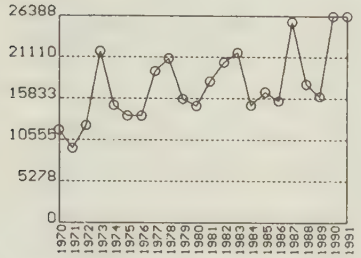
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pomfrets, nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 43.89 %
Rank..... 6 of 12 based on:1990
Percent to total..... 5.08 % , Cumulative: 87.59 %



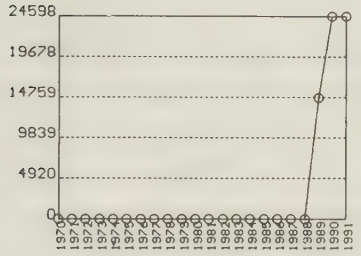
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Amberjacks nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... -0.13 %
Rank..... 7 of 12 based on:1990
Percent to total..... 3.52 % , Cumulative: 91.12 %



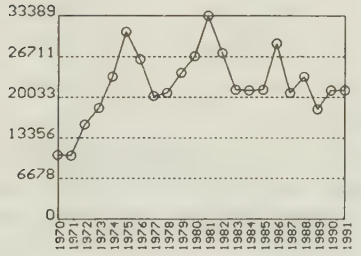
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Common dolphinfish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 9.01 %
Rank..... 8 of 12 based on:1990
Percent to total..... 1.61 % , Cumulative: 92.73 %



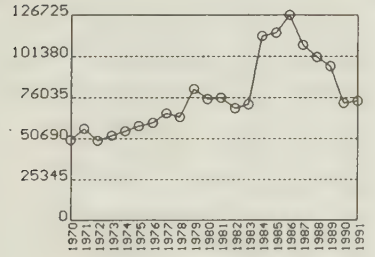
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indian scad
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation.....
Trend..... 83.95 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.51 % , Cumulative: 94.24 %



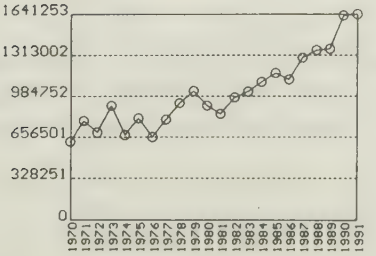
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Butterfishes, silver pomfrets
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 4.23 %
Rank..... 10 of 12 based on:1990
Percent to total..... 1.30 % , Cumulative: 95.54 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER JACKS, MULLETS, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 11.74 %
Rank..... 11 of 12 based on:1990
Percent to total..... 4.43 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL JACKS, MULLETS, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 14.44 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.6 Production of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35).

Table 2.6.1

PACIFIC, NORTHWEST
Herrings, sardines, etc. (ISSCAAP GROUP 35),ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Japanese pilchard	1	4690544	86.5 %	Rising
Japanese anchovy	2	482131	8.9 %	Stable (-)
Pacific herring	3	109165	2.0 %	Declining
Clupeoids nei	4	85361	1.6 %	Rising
Red-eye round herring	5	51950	1.0 %	Stable (-)
Japanese sardinella	6	4205	0.1 %	Rising
Silver-stripe round herring	7	543	0.0 %	Declining
Sardinellas nei	8	411	0.0 %	Declining
Slender rainbow sardine	9	230	0.0 %	Declining
Dorab wolf-herring	10	17	0.0 %	Sharp rise
Stolephorus anchovies	11	12	0.0 %	Declining
TOTAL HERRINGS, SARDINES, ETC.		5424569	100.0 %	Rising

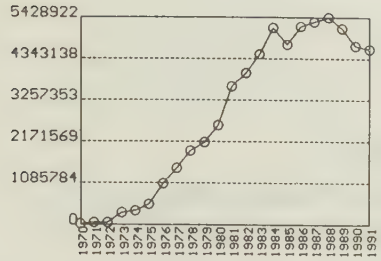
Proportion coming from declining catches.....	2.0 %
from stable catches.....	9.9 %
from rising catches.....	88.1 %

Major fishing countries ranked by 1990 production: Japan:75.75%, USSR:18.01%, Korea Rep:5.74%, Other nei A:0.41%, China:0.07%, Hong Kong:0.01%.

Table 2.6.2

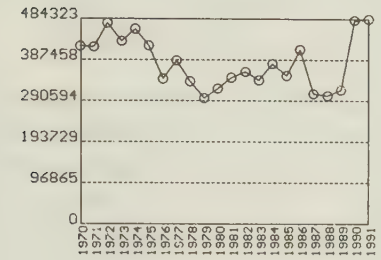
PACIFIC, NORTHWEST
Ranking order and proportions of herrings, sardines, etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	-1980- CATCH (MT)	-1980- RANK AND PERCENT	-1970- CATCH (MT)	-1970- RANK AND PERCENT
Japanese pilchard	1	2595315	1 82.1%	16900	5 1.8%
Japanese anchovy	2	320261	2 10.1%	419500	2 43.4%
Pacific herring	3	128813	3 4.1%	425900	1 44.1%
Clupeoids nei	4	64136	4 2.0%	56000	3 5.8%
Red-eye round herring	5	41897	5 1.3%	33400	4 3.5%
Japanese sardinella	6	5102	6 0.2%	0	10 0.0%
Silver-stripe round herring	7	1889	7 0.1%	9600	6 1.0%
Sardinellas nei	8	1664	8 0.1%	4000	7 0.4%
Slender rainbow sardine	9	560	9 0.0%	800	8 0.1%
Dorab wolf-herring	10	0	12 0.0%	0	12 0.0%
Stolephorus anchovies	11	89	11 0.0%	800	9 0.1%
TOTALS		3160033	100.0%	966900	100.0%



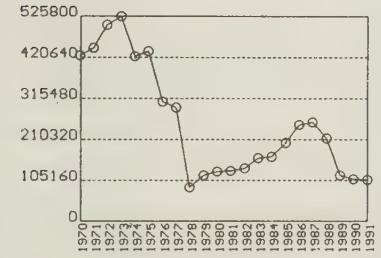
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese pilchard
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 37.45 %
Rank..... 1 of 6 based on:1990
Percent to total..... 86.47 % , Cumulative: 86.47 %



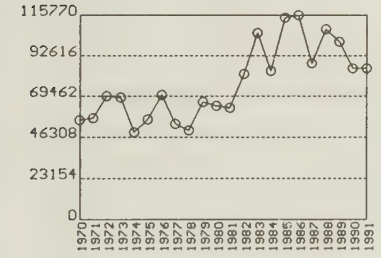
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese anchovy
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... -1.99 %
Rank..... 2 of 6 based on:1990
Percent to total..... 8.89 % , Cumulative: 95.36 %



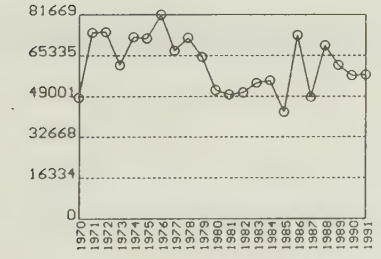
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific herring
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend.....-23.49 %
Rank..... 3 of 6 based on:1990
Percent to total..... 2.01 % , Cumulative: 97.37 %



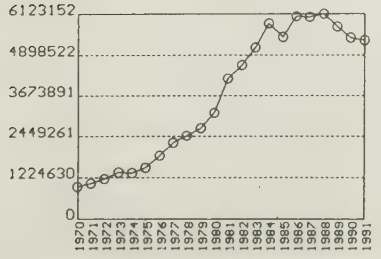
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Clupeoids nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 11.18 %
Rank..... 4 of 6 based on:1990
Percent to total..... 1.57 % , Cumulative: 98.94 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER HERRINGS, SARDINES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... -3.57 %
Rank..... 5 of 6 based on:1990
Percent to total..... 1.06 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL HERRINGS, SARDINES, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 27.81 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.7 Production of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36).

Table 2.7.1

PACIFIC, NORTHWEST
Tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Japanese Spanish mackerel	1	245866	40.0 %	Rising
Skipjack tuna	2	139144	22.6 %	Stable (-)
Albacore	3	63134	10.3 %	Stable (-)
Yellowfin tuna	4	33756	5.5 %	Rising
Frigate and bullet tunas	5	27261	4.4 %	Stable (-)
Longtail tuna	6	26839	4.4 %	Rising
Tuna-like fishes nei	7	14090	2.3 %	Declining
Bigeye tuna	8	10669	1.7 %	Stable (-)
Indo-Pacific blue marlin	9	10384	1.7 %	Rising
Swordfish	10	9226	1.5 %	Stable (+)
Seerfishes nei	11	8702	1.4 %	Rising
Striped marlin	12	7175	1.2 %	Stable (+)
Kawakawa	13	4824	0.8 %	Rising
Indo-Pacific sailfish	14	4823	0.8 %	Rising
Northern bluefin tuna	15	4698	0.8 %	Declining
Black marlin	16	3299	0.5 %	Stable (+)
Indo-Pacific king mackerel	17	1308	0.2 %	Declining
Southern bluefin tuna	18	0	0.0 %	Sharp decl
Wahoo	19	0	0.0 %	Sharp decl
Marlins,sailfishes,spearfishes	20	0	0.0 %	Rising
TOTAL TUNAS, BONITOS, ETC.		615198	100.0 %	Rising

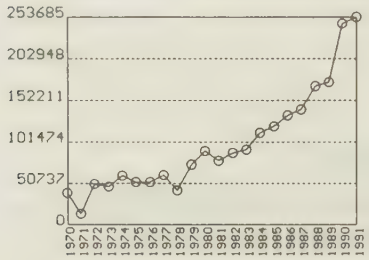
Proportion coming from declining catches.....	3.3 %
from stable catches.....	42.3 %
from rising catches.....	54.5 %

Major fishing countries ranked by 1990 production: Japan:34.42%, China:33.90%, Other nei A:28.24%, Korea Rep:2.75%, Hong Kong:0.68%.

Table 2.7.2

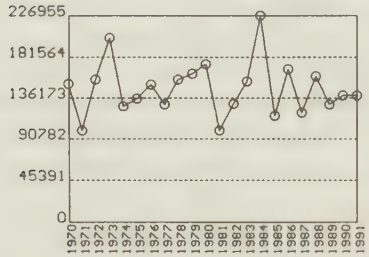
PACIFIC, NORTHWEST
Ranking order and proportions of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Japanese Spanish mackerel	1	90708	2 18.6%	38863	2 11.2%
Skipjack tuna	2	173981	1 35.7%	151676	1 43.6%
Albacore	3	58925	3 12.1%	33741	3 9.7%
Yellowfin tuna	4	42041	4 8.6%	24137	5 6.9%
Frigate and bullet tunas	5	27184	6 5.6%	26535	4 7.6%
Longtail tuna	6	6995	11 1.4%	1103	14 0.3%
Tuna-like fishes nei	7	29864	5 6.1%	13988	8 4.0%
Bigeye tuna	8	12020	8 2.5%	21251	6 6.1%
Indo-Pacific blue marlin	9	5987	12 1.2%	2289	12 0.7%
Swordfish	10	7481	9 1.5%	7305	9 2.1%
Seerfishes nei	11	2136	14 0.4%	2400	11 0.7%
Striped marlin	12	7454	10 1.5%	7089	10 2.0%
Kawakawa	13	1615	16 0.3%	0	16 0.0%
Indo-Pacific sailfish	14	5209	13 1.1%	1588	13 0.5%
Northern bluefin tuna	15	14068	7 2.9%	15000	7 4.3%
Black marlin	16	1991	15 0.4%	965	15 0.3%
Indo-Pacific king mackerel	17	0	17 0.0%	0	20 0.0%
Southern bluefin tuna	18	0	18 0.0%	0	17 0.0%
Wahoo	19	0	19 0.0%	0	18 0.0%
Marlins,sailfishes,spearfishes	20	0	20 0.0%	0	19 0.0%
TOTALS		487659	100.0%	347930	100.0%



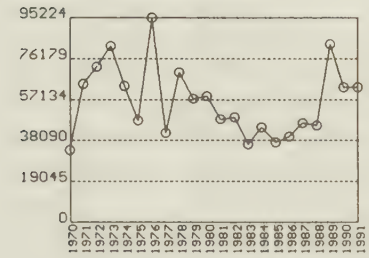
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese Spanish mackerel
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 31.87 %
Rank..... 1 of 12 based on:1990
Percent to total..... 39.97 % , Cumulative: 39.97 %



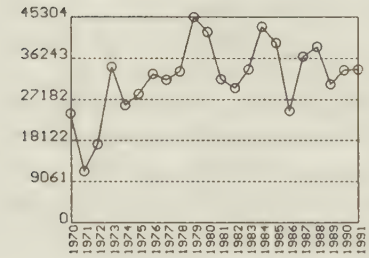
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skipjack tuna
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 25 %
Trend..... -0.24 %
Rank..... 2 of 12 based on:1990
Percent to total..... 22.62 % , Cumulative: 62.58 %



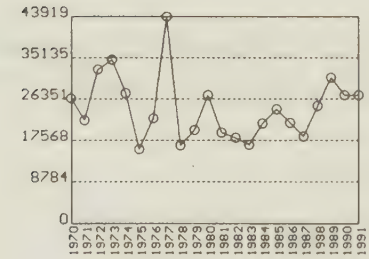
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Albacore
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 22 %
Trend..... -2.80 %
Rank..... 3 of 12 based on:1990
Percent to total..... 10.26 % , Cumulative: 72.85 %



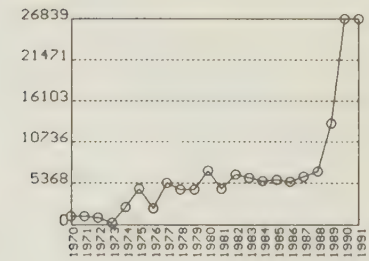
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowfin tuna
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 6.85 %
Rank..... 4 of 12 based on:1990
Percent to total..... 5.49 % , Cumulative: 78.33 %



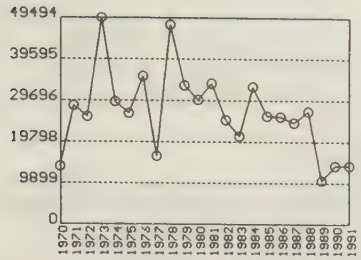
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Frigate and bullet tunas
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... -2.18 %
Rank..... 5 of 12 based on:1990
Percent to total..... 4.43 % , Cumulative: 82.76 %



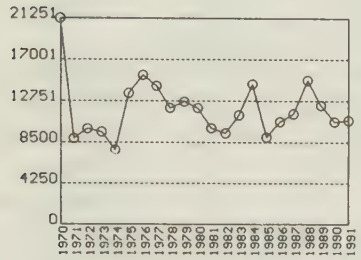
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Longtail tuna
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 42.42 %
Rank..... 6 of 12 based on:1990
Percent to total..... 4.36 % , Cumulative: 87.13 %



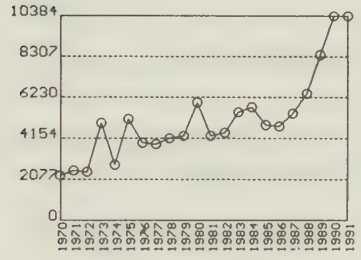
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tuna-like fishes nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 21 %
Trend..... -7.83 %
Rank..... 7 of 12 based on:1990
Percent to total..... 2.29 % , Cumulative: 89.42 %



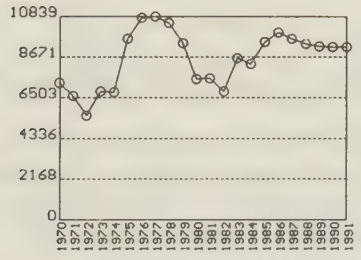
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeye tuna
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -2.02 %
Rank..... 8 of 12 based on:1990
Percent to total..... 1.73 % , Cumulative: 91.15 %



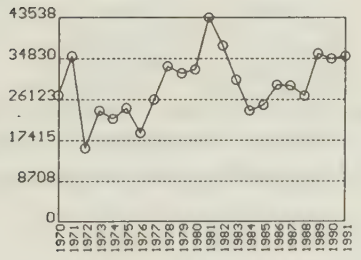
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indo-Pacific blue marlin
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 19.22 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.69 % , Cumulative: 92.84 %



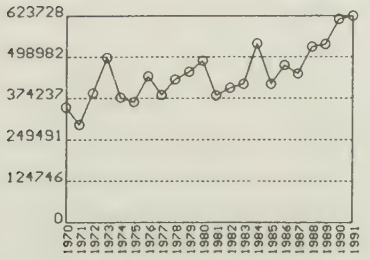
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Swordfish
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 4.24 %
Rank..... 10 of 12 based on:1990
Percent to total..... 1.50 % , Cumulative: 94.34 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 5.08 %
Rank..... 11 of 12 based on:1990
Percent to total..... 5.65 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL TUNAS, BONITOS, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 7.78 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.8 Production of mackerels, snoeks, cutlassfishes, etc. (ISSCAAP GROUP 37).

Table 2.8.1

PACIFIC, NORTHWEST
Mackerels, snoeks, cutlassfishes, etc. (ISSCAAP GROUP 37), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Largehead hairtail	1	654628	51.6 %	Stable (-)
Chub mackerel	2	611744	48.2 %	Declining
Hairtails, cutlassfishes, nei	3	2976	0.2 %	Rising
Mackerel-like fishes nei	4	0	0.0 %	Sharp decl
TOTAL MACKERELS, SNOEKS, ETC.		1269348	100.0 %	Declining

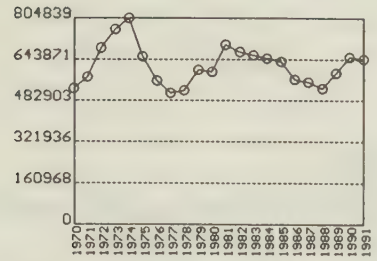
Proportion coming from declining catches.....	48.2 %
from stable catches.....	51.6 %
from rising catches.....	0.2 %

Major fishing countries ranked by 1990 production: China:54.72%, Japan:23.95%, Korea Rep:15.85%, Other nei A:4.52%, USSR:0.73%, Hong Kong:0.23%.

Table 2.8.2

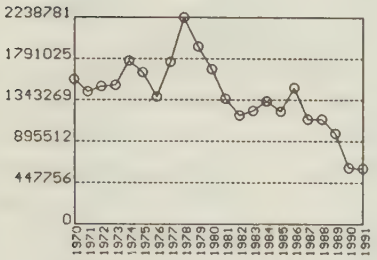
PACIFIC, NORTHWEST
Ranking order and proportions of mackerels, snoeks, etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Largehead hairtail	1	596554	2 26.2%	531100	2 25.2%
Chub mackerel	2	1679126	1 73.7%	1571600	1 74.7%
Hairtails, cutlassfishes, nei	3	2383	3 0.1%	2000	3 0.1%
Mackerel-like fishes nei	4	0	4 0.0%	200	4 0.0%
TOTALS		2278063	100.0%	2104900	100.0%



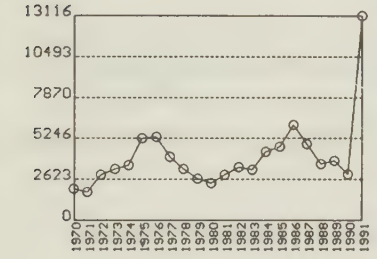
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Largehead hairtail
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... -0.89 %
Rank..... 1 of 4 based on:1990
Percent to total..... 51.57 % , Cumulative: 51.57 %



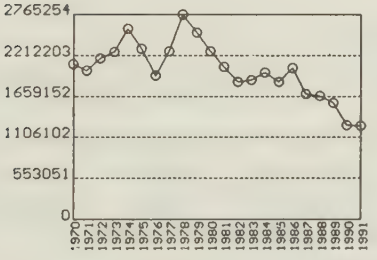
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chub mackerel
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend.....-10.25 %
Rank..... 2 of 4 based on:1990
Percent to total..... 48.19 % , Cumulative: 99.77 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Hairtails, cutlassfishes, nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 14.68 %
Rank..... 3 of 4 based on:1990
Percent to total..... 0.23 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MACKERELS, SNOEKS, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... -7.32 %
Rank..... 4 of 4 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.9 Production of sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38).

Table 2.9.1

PACIFIC, NORTHWEST
Sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Sharks, rays, skates, etc	1	92966	85.4 %	Stable (-)
Skates and rays, nei	2	10345	9.5 %	Stable (-)
Whip stingray	3	5492	5.1 %	Declining
Dogfish sharks nei	4	0	0.0 %	Sharp decl
TOTAL SHARKS, RAYS, ETC.		108803	100.0 %	Stable (-)

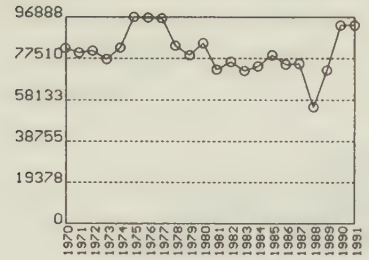
Proportion coming from declining catches.....	5.1 %
from stable catches.....	95.0 %
from rising catches.....	0.0 %

Major fishing countries ranked by 1990 production: Other nei A:68.69%, Japan:20.98%, Korea Rep:9.60%, Hong Kong:0.73%.

Table 2.9.2

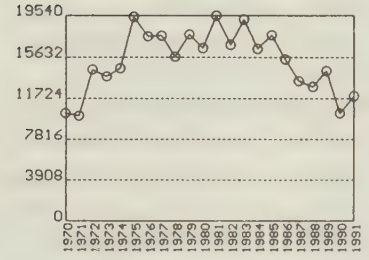
PACIFIC, NORTHWEST
Ranking order and proportions of sharks, rays, etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Sharks, rays, skates, etc	1	84799	1 74.9%	82500	1 79.5%
Skates and rays, nei	2	16527	2 14.6%	10300	2 9.9%
Whip stingray	3	11882	3 10.5%	10200	3 9.8%
Dogfish sharks nei	4	0	4 0.0%	800	4 0.8%
TOTALS		113208	100.0%	103800	100.0%



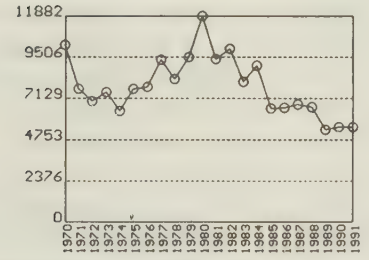
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sharks, rays, skates, etc
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -1.87 %
Rank..... 1 of 5 based on:1990
Percent to total..... 85.44 % , Cumulative: 85.44 %



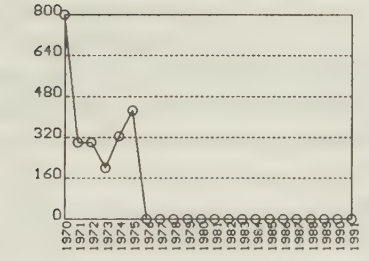
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skates and rays, nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 19 %
Trend..... -0.35 %
Rank..... 2 of 5 based on:1990
Percent to total..... 9.51 % , Cumulative: 94.95 %



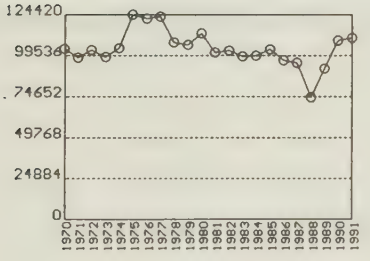
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Whip stingray
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -5.14 %
Rank..... 3 of 5 based on:1990
Percent to total..... 5.05 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Dogfish sharks nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend.....-73.08 %
Rank..... 4 of 5 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL SHARKS, RAYS, ETC.
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... -1.97 %
Rank..... 5 of 5 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.10 Production of crustaceans (ISSCAAP GROUPS 41-47).

Table 2.10.1

PACIFIC, NORTHWEST
Crustaceans (ISSCAAP GROUPS 41-47),
ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Marine crabs nei	1	624926	44.0 %	Rising
Akiami paste shrimp	2	235933	16.6 %	Rising
Fleshy prawn	3	224554	15.8 %	Rising
Natantian decapods nei	4	132035	9.3 %	Rising
Cocktail shrimp	5	97547	6.9 %	Sharp rise
King crabs	6	42560	3.0 %	Rising
Gazami crab	7	27520	1.9 %	Rising
Kuruma prawn	8	18952	1.3 %	Rising
Pacific snow crabs	9	4799	0.3 %	Declining
Sand crab	10	4246	0.3 %	Sharp rise
Shiba shrimp	11	3834	0.3 %	Rising
Mud crab	12	1374	0.1 %	Sharp rise
Longlegged spiny lobster	13	1341	0.1 %	Stable (-)
Pink(=Pandalid)shrimps	14	1326	0.1 %	Rising
Marine crustaceans nei	15	93	0.0 %	Declining
Tropical spiny lobsters nei	16	66	0.0 %	Sharp rise
Northern prawn	17	0	0.0 %	Sharp decl
Pacific shrimps	18	0	0.0 %	Sharp decl
TOTAL CRUSTACEANS		1421106	100.0 %	Rising

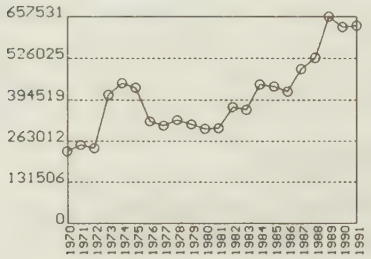
Proportion coming from declining catches.....	0.4 %
from stable catches.....	0.1 %
from rising catches.....	99.5 %

Major fishing countries ranked by 1990 production: China:75.33%, Korea Rep:7.91%, Japan:7.26%, Other nei A:5.46%, USSR:3.03%, Hong Kong:0.93%, Macau:0.08%.

Table 2.10.2

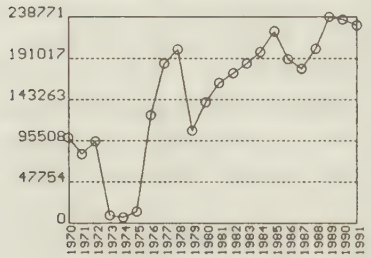
PACIFIC, NORTHWEST
Ranking order and proportions of crustaceans (ISSCAAP GROUPS 41-47), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Marine crabs nei	1	302254	1 42.4%	231300	1 43.8%
Akiami paste shrimp	2	140760	3 19.7%	99200	2 18.8%
Fleshy prawn	3	37160	4 5.2%	14900	6 2.8%
Natantian decapods nei	4	148529	2 20.8%	93000	3 17.6%
Cocktail shrimp	5	14638	7 2.1%	0	14 0.0%
King crabs	6	19049	6 2.7%	37200	4 7.0%
Gazami crab	7	22541	5 3.2%	3700	9 0.7%
Kuruma prawn	8	8034	9 1.1%	4000	8 0.8%
Pacific snow crabs	9	14220	8 2.0%	36000	5 6.8%
Sand crab	10	0	18 0.0%	0	18 0.0%
Shiba shrimp	11	2710	10 0.4%	600	12 0.1%
Mud crab	12	0	16 0.0%	0	16 0.0%
Longlegged spiny lobster	13	1196	12 0.2%	1700	10 0.3%
Pink(=Pandalid)shrimps	14	390	13 0.1%	0	13 0.0%
Marine crustaceans nei	15	221	14 0.0%	900	11 0.2%
Tropical spiny lobsters nei	16	0	15 0.0%	0	15 0.0%
Northern prawn	17	1609	11 0.2%	6000	7 1.1%
Pacific shrimps	18	0	17 0.0%	0	17 0.0%
TOTALS		713311	100.0%	528500	100.0%



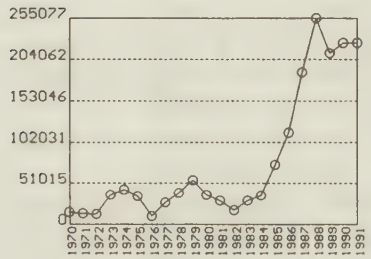
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine crabs nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 13.25 %
Rank..... 1 of 12 based on:1990
Percent to total..... 43.97 % , Cumulative: 43.97 %



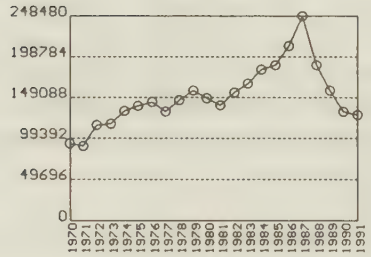
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Akiami paste shrimp
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 21.62 %
Rank..... 2 of 12 based on:1990
Percent to total..... 16.60 % , Cumulative: 60.58 %



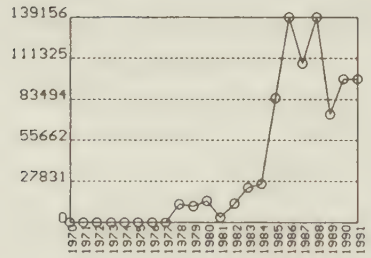
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Fleshy prawn
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 45.99 %
Rank..... 3 of 12 based on:1990
Percent to total..... 15.80 % , Cumulative: 76.38 %



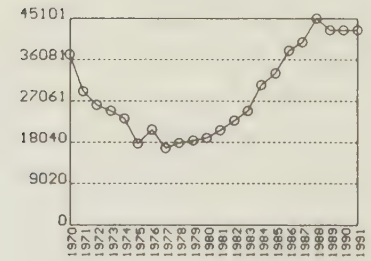
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Natantian decapods nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 8.47 %
Rank..... 4 of 12 based on:1990
Percent to total..... 9.29 % , Cumulative: 85.67 %



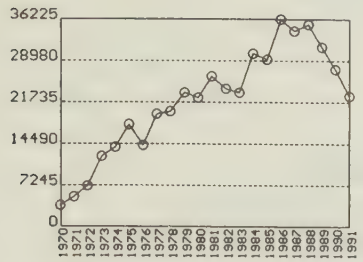
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Cocktail shrimp
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 57.61 %
Rank..... 5 of 12 based on:1990
Percent to total..... 6.86 % , Cumulative: 92.53 %



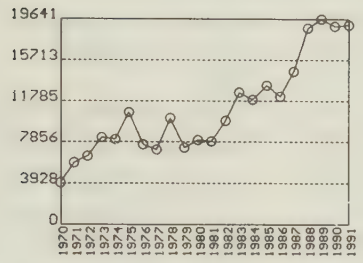
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....King crabs
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 11.25 %
Rank..... 6 of 12 based on:1990
Percent to total..... 2.99 % , Cumulative: 95.53 %



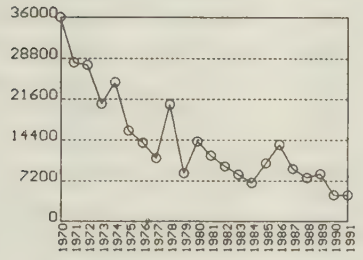
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Gazami crab
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 20.56 %
Rank..... 7 of 12 based on:1990
Percent to total..... 1.94 % , Cumulative: 97.46 %



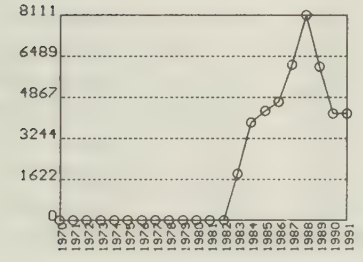
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Kuruma prawn
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 20.62 %
Rank..... 8 of 12 based on:1990
Percent to total..... 1.33 % , Cumulative: 98.80 %



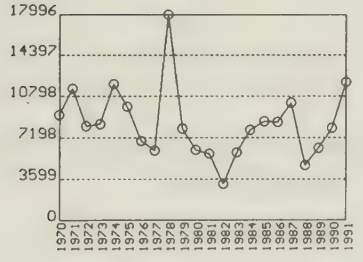
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific snow crabs
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-26.97 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.34 % , Cumulative: 99.14 %



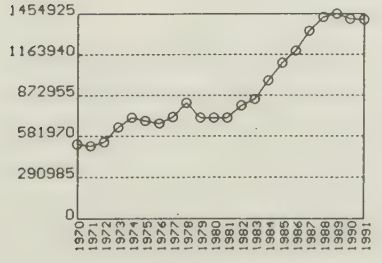
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sand crab
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 60.04 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.30 % , Cumulative: 99.43 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CRUSTACEANS
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -4.14 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.56 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CRUSTACEANS
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 18.04 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

2.11 Production of molluscs (ISSCAAP GROUPS 51-58).

Table 2.11.1

PACIFIC, NORTHWEST
Molluscs (ISSCAAP GROUPS 51-58),
ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Pacific cupped oyster	1	595395	16.4 %	Rising
Japanese scallop	2	570939	15.7 %	Rising
Sea mussels nei	3	511306	14.1 %	Rising
Squids nei	4	472363	13.0 %	Rising
Marine molluscs nei	5	373740	10.3 %	Rising
Japanese flying squid	6	309157	8.5 %	Declining
Japanese(=Manila)clam	7	255509	7.0 %	Rising
Clams nei	8	142762	3.9 %	Stable (+)
Razor clams	9	140326	3.9 %	Sharp rise
Octopuses	10	71368	2.0 %	Stable (+)
Blood cockle	11	53067	1.5 %	Rising
Cuttlefishes, bobtail squids	12	44428	1.2 %	Rising
Ark clams	13	18773	0.5 %	Rising
Mogai clam	14	16923	0.5 %	Declining
Korean mussel	15	15506	0.4 %	Stable (-)
Horned turban	16	12002	0.3 %	Stable (-)
Hen clam	17	11363	0.3 %	Stable (+)
Gastropods nei	18	7533	0.2 %	Rising
Giant abalone	19	3353	0.1 %	Declining
Japanese hard clam	20	3319	0.1 %	Declining
Cockles nei	21	3119	0.1 %	Rising
Cephalopods nei	22	2960	0.1 %	Sharp rise
Abalones nei	23	344	0.0 %	Declining
TOTAL MOLLUSCS		3635555	100.0 %	Rising

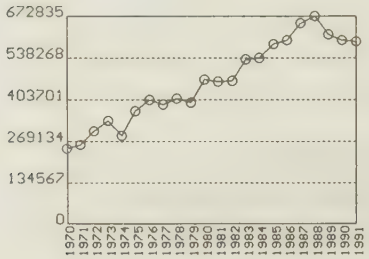
Proportion coming from declining catches.....	9.2 %
from stable catches.....	7.0 %
from rising catches.....	83.9 %

Major fishing countries ranked by 1990 production: China:39.45%, Japan:35.75%, Korea Rep:17.26%, Other nei A:4.80%, USSR:2.42%, Hong Kong:0.32%.

Table 2.11.2

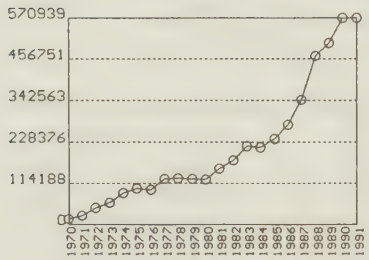
PACIFIC, NORTHWEST
Ranking order and proportions of molluscs (ISSCAAP GROUPS 51-58), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Pacific cupped oyster	1	469325	1 21.5%	246500	2 15.8%
Japanese scallop	2	125387	7 5.8%	16500	12 1.1%
Sea mussels nei	3	64344	10 3.0%	37100	8 2.4%
Squids nei	4	378391	3 17.4%	125500	6 8.0%
Marine molluscs nei	5	193687	4 8.9%	199200	3 12.8%
Japanese flying squid	6	378954	2 17.4%	484300	1 31.0%
Japanese(=Manila)clam	7	171089	5 7.9%	152700	4 9.8%
Clams nei	8	137504	6 6.3%	125600	5 8.0%
Razor clams	9	0	22 0.0%	0	21 0.0%
Octopuses	10	54801	11 2.5%	49100	7 3.1%
Blood cockle	11	6235	14 0.3%	23300	11 1.5%
Cuttlefishes, bobtail squids	12	70138	8 3.2%	27300	10 1.8%
Ark clams	13	3105	19 0.1%	500	18 0.0%
Mogai clam	14	1677	20 0.1%	28300	9 1.8%
Korean mussel	15	70005	9 3.2%	10800	15 0.7%
Horned turban	16	14228	13 0.7%	11200	14 0.7%
Hen clam	17	21716	12 1.0%	4100	17 0.3%
Gastropods nei	18	3955	18 0.2%	0	23 0.0%
Giant abalone	19	4878	15 0.2%	6500	16 0.4%
Japanese hard clam	20	4108	17 0.2%	13100	13 0.8%
Cockles nei	21	4418	16 0.2%	0	20 0.0%
Cephalopods nei	22	0	23 0.0%	0	22 0.0%
Abalones nei	23	638	21 0.0%	400	19 0.0%
TOTALS		2178583	100.0%	1562000	100.0%



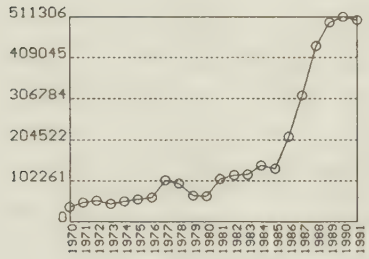
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific cupped oyster
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 14.79 %
Rank..... 1 of 12 based on:1990
Percent to total..... 16.38 % , Cumulative: 16.38 %



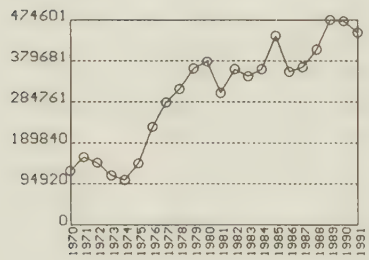
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese scallop
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 40.52 %
Rank..... 2 of 12 based on:1990
Percent to total..... 15.70 % , Cumulative: 32.08 %



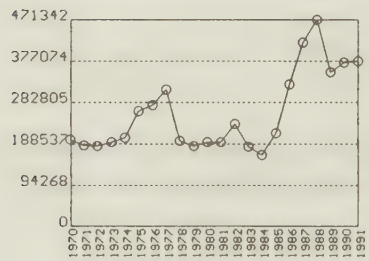
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sea mussels nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 44.17 %
Rank..... 3 of 12 based on:1990
Percent to total..... 14.06 % , Cumulative: 46.15 %



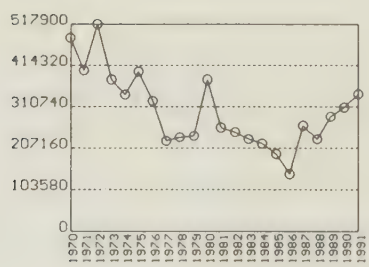
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Squids nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 20.12 %
Rank..... 4 of 12 based on:1990
Percent to total..... 12.99 % , Cumulative: 59.14 %



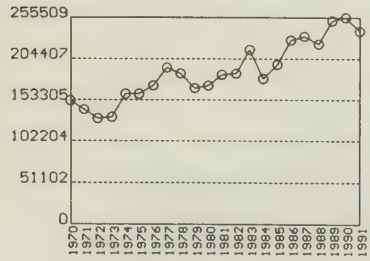
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine molluscs nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 12.46 %
Rank..... 5 of 12 based on:1990
Percent to total..... 10.28 % , Cumulative: 69.42 %



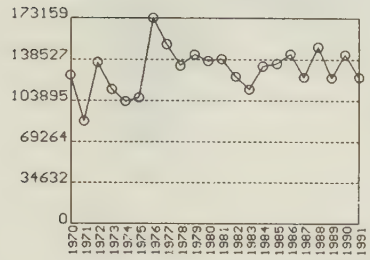
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese flying squid
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend.....-10.47 %
Rank..... 6 of 12 based on:1990
Percent to total..... 8.50 % , Cumulative: 77.92 %



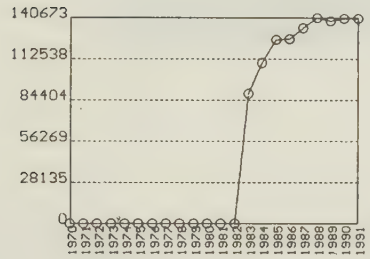
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Japanese(=Manila)clam
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 9.87 %
Rank..... 7 of 12 based on:1990
Percent to total..... 7.03 % , Cumulative: 84.95 %



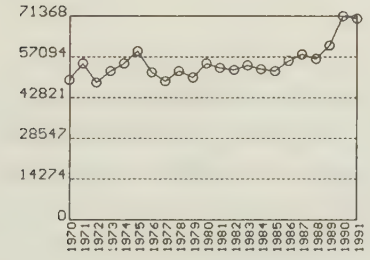
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Clams nei
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 2.15 %
Rank..... 8 of 12 based on:1990
Percent to total..... 3.93 % , Cumulative: 88.88 %



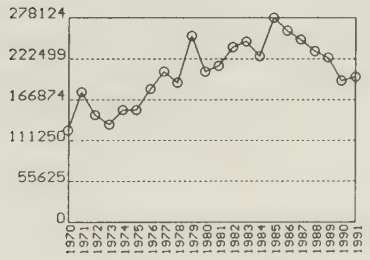
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Razor clams
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 0 %
Trend..... 59.08 %
Rank..... 9 of 12 based on:1990
Percent to total..... 3.86 % , Cumulative: 92.74 %



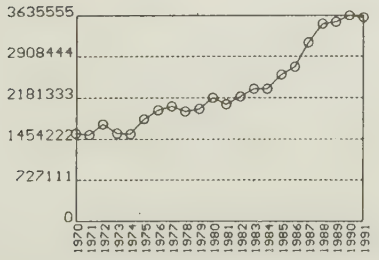
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Octopuses
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 3.93 %
Rank..... 10 of 12 based on:1990
Percent to total..... 1.96 % , Cumulative: 94.70 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MOLLUSCS
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

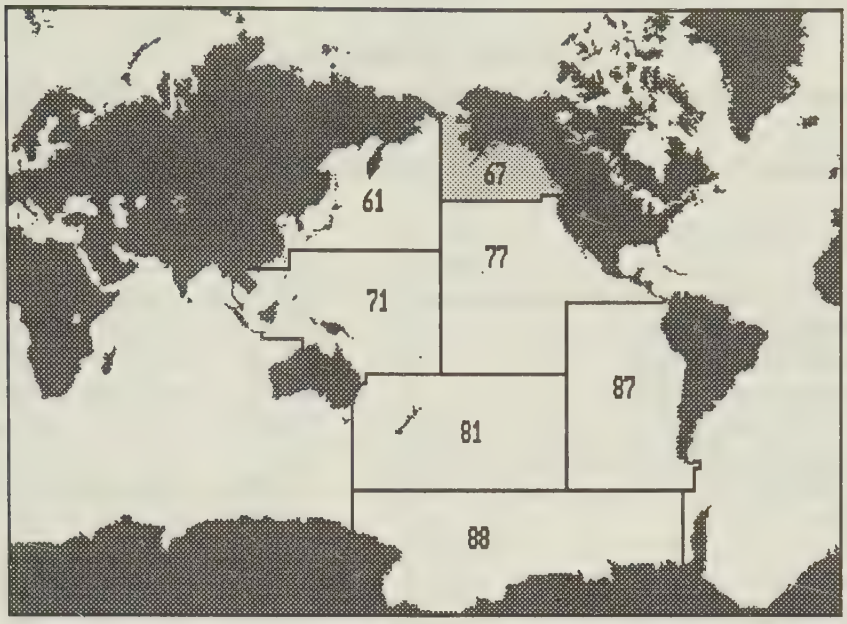
Fluctuation..... 10 %
Trend..... 8.07 %
Rank..... 11 of 12 based on:1990
Percent to total..... 5.31 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MOLLUSCS
Area.....PACIFIC, NORTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 15.50 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3. PACIFIC, NORTHEAST (Area 67)



Major producers of fish, crustaceans and molluscs (1990 ranking): USA:89.09%, Canada:6.50%, Korea Rep:2.46%, Japan:1.22%, China:0.61%, Poland:0.12%, USSR:0.01%.

Major species and percentages based on 1990 ranking: Alaska pollack(Walleye poll.):46.44%,Pacific cod:7.92%, North Pacific hake:5.60%, Sockeye(=Red)salmon:5.49%, Yellowfinsole:4.57%,Pink(=Humpback)salmon:4.54%,Flatfishesnei:3.21%,Pacificsnow crabs:2.94%, Pacific herring:2.49%, Scorpionfishes, nei:2.01%, Pacific ocean perch:1.49%, Chum(=Keta=Dog)salmon:1.48%, Squids nei:1.33%, Sablefish:1.32%, Pacific cupped oyster:1.26%, Rock sole:1.15%, Pacific halibut:1.11%, Coho(=Silver)salmon:1.02%, Pacific shrimps:0.78%, Chinook(=Spring=King)salmon:0.73%, Atka mackerel:0.68%, Dungeness crab:0.48%, King crabs:0.47%, Arrowtooth flounder:0.35%, Lingcod:0.22%, Geoduck clam:0.22%, Marine molluscs nei:0.12%, Picked(=Spiny)dogfish:0.10%, OTHER SPECIES:0.49%.

3.1 Production of diadromous fish (ISSCAAP GROUPS 21-25).

Table 3.1.1

PACIFIC, NORTHEAST
Diadromous fish (ISSCAAP GROUPS 21-25), ranked by 1990 production.

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Sockeye(=Red)salmon	1	180660	41.3 %	Rising
Pink(=Humpback)salmon	2	149513	34.2 %	Rising
Chum(=Keta=Dog)salmon	3	48724	11.1 %	Rising
Coho(=Silver)salmon	4	33694	7.7 %	Stable (+)
Chinook(=Spring=King)salmon	5	24133	5.5 %	Stable (+)
Rainbow trout	6	600	0.1 %	Rising
Smelts nei	7	27	0.0 %	Declining
Eulachon	8	20	0.0 %	Declining
Sturgeons nei	9	9	0.0 %	Stable (-)
TOTAL DIADROMOUS		437380	100.0 %	Rising

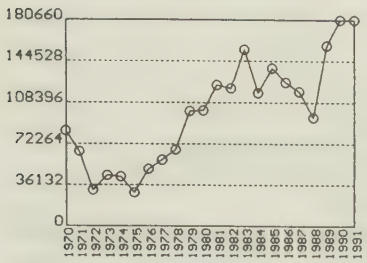
Proportion coming from declining catches.....	0.0 %
from stable catches.....	13.2 %
from rising catches.....	86.8 %

Major fishing countries ranked by 1990 production: USA:75.62%, Canada:24.38%.

Table 3.1.2

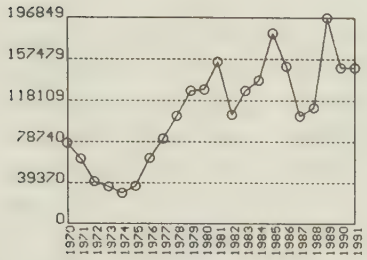
PACIFIC, NORTHEAST
Ranking order and proportions of diadromous species in 1990, 1980 and 1970.

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Sockeye(=Red)salmon	1	101872	2 30.7%	83800	1 32.5%
Pink(=Humpback)salmon	2	128723	1 38.8%	77400	2 30.1%
Chum(=Keta=Dog)salmon	3	55327	3 16.7%	42800	3 16.6%
Coho(=Silver)salmon	4	26791	4 8.1%	33000	4 12.8%
Chinook(=Spring=King)salmon	5	17622	5 5.3%	19300	5 7.5%
Rainbow trout	6	52	9 0.0%	100	9 0.0%
Smelts nei	7	130	7 0.0%	200	8 0.1%
Eulachon	8	1430	6 0.4%	700	6 0.3%
Sturgeons nei	9	19	10 0.0%	0	10 0.0%
TOTALS		332093	100.0%	257600	100.0%



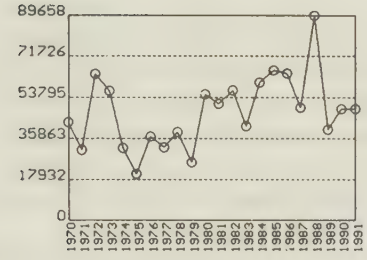
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sockeye(=Red)salmon
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 21.60 %
Rank..... 1 of 6 based on:1990
Percent to total..... 41.31 % , Cumulative: 41.31 %



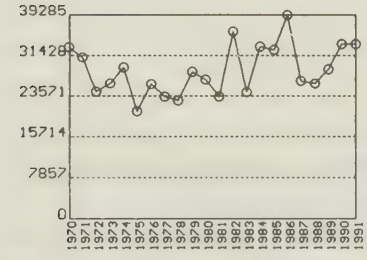
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pink(=Humpback)salmon
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 19.76 %
Rank..... 2 of 6 based on:1990
Percent to total..... 34.18 % , Cumulative: 75.49 %



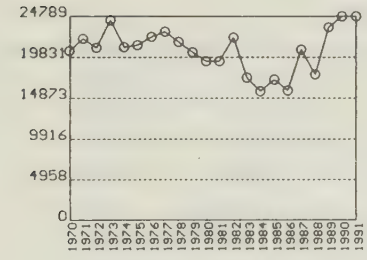
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chum(=Keta=Dog)salmon
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 19 %
Trend..... 7.53 %
Rank..... 3 of 6 based on:1990
Percent to total..... 11.14 % , Cumulative: 86.63 %



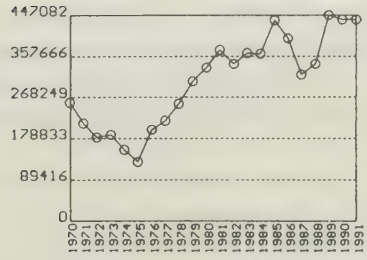
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Coho(=Silver)salmon
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 21 %
Trend..... 3.21 %
Rank..... 4 of 6 based on:1990
Percent to total..... 7.70 % , Cumulative: 94.33 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER DIADROMOUS
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... -0.90 %
Rank..... 5 of 6 based on:1990
Percent to total..... 5.67 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL DIADROMOUS
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 15.47 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.2 Production of flounders, halibuts, soles, etc. (ISSCAAP GROUP 31).

Table 3.2.1

PACIFIC, NORTHEAST
Flounders, halibuts, soles, etc. (ISSCAAP GROUP 31), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Yellowfin sole	1	150331	44.0 %	Rising
Flatfishes nei	2	105529	30.9 %	Stable (+)
Rock sole	3	37817	11.1 %	Rising
Pacific halibut	4	36682	10.7 %	Rising
Arrowtooth flounder	5	11372	3.3 %	Rising
Flathead sole	6	8	0.0 %	Declining
Greenland halibut	7	0	0.0 %	Sharp decl
Alaska plaice	8	0	0.0 %	Stable (-)
Kamchatka flounder	9	0	0.0 %	Declining
TOTAL FLOUNDERS, SOLES, ETC.		341739	100.0 %	Rising

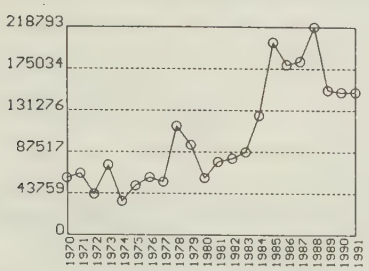
Proportion coming from declining catches.....	0.0 %
from stable catches.....	30.9 %
from rising catches.....	69.1 %

Major fishing countries ranked by 1990 production: USA:96.75%, Canada:3.09%, Korea Rep:0.10%, USSR:0.06%.

Table 3.2.2

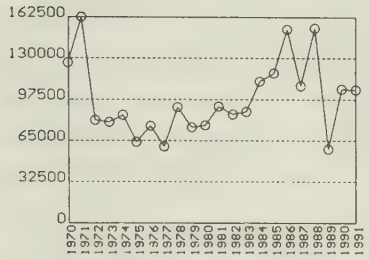
PACIFIC, NORTHEAST
Ranking order and proportions of flounders, halibuts, soles, etc., (ISSCAAP GROUP 31), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Yellowfin sole	1	60199	2 33.4%	60200	2 21.1%
Flatfishes nei	2	77074	1 42.7%	126600	1 44.4%
Rock sole	3	4019	6 2.2%	8500	7 3.0%
Pacific halibut	4	12999	4 7.2%	34000	3 11.9%
Arrowtooth flounder	5	2304	8 1.3%	0	9 0.0%
Flathead sole	6	4384	5 2.4%	19100	5 6.7%
Greenland halibut	7	0	9 0.0%	15800	6 5.6%
Alaska plaice	8	3769	7 2.1%	1300	8 0.5%
Kamchatka flounder	9	15760	3 8.7%	19400	4 6.8%
TOTALS		180508	100.0%	284900	100.0%



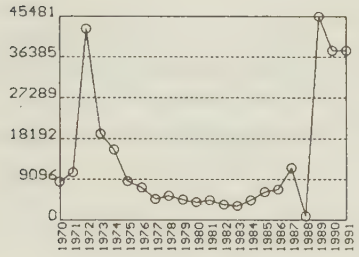
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowfin sole
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 23.27 %
Rank..... 1 of 6 based on:1990
Percent to total..... 43.99 % , Cumulative: 43.99 %



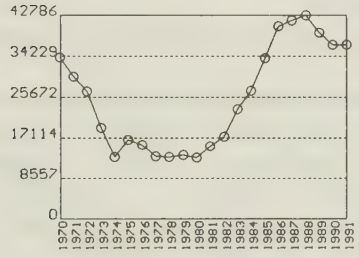
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flatfishes nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 21 %
Trend..... 2.46 %
Rank..... 2 of 6 based on:1990
Percent to total..... 30.88 % , Cumulative: 74.87 %



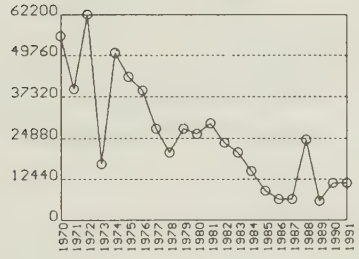
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Rock sole
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 11.86 %
Rank..... 3 of 6 based on:1990
Percent to total..... 11.07 % , Cumulative: 85.94 %



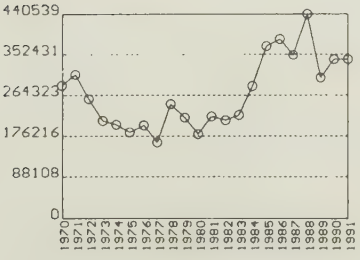
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific halibut
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 13.15 %
Rank..... 4 of 6 based on:1990
Percent to total..... 10.73 % , Cumulative: 96.67 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER FLOUNDERS, SOLES, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 14 %
Trend.....-27.80 %
Rank..... 5 of 6 based on:1990
Percent to total..... 3.33 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL FLOUNDERS, SOLES, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 9.19 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.3 Production of cods, hakes, haddocks, etc. (ISSCAAP GROUP 32).

Table 3.3.1

PACIFIC, NORTHEAST
Cods, hakes, haddocks, etc. (ISSCAAP GROUP 32), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Alaska pollack(Walleye poll.)	1	1529019	77.5 %	Rising
Pacific cod	2	260595	13.2 %	Rising
North Pacific hake	3	184281	9.3 %	Stable (+)
Grenadiers	4	0	0.0 %	Stable (-)
TOTAL CODS, HAKES, ETC.		1973895	100.0 %	Rising

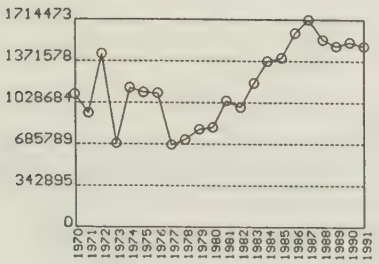
Proportion coming from declining catches.....	0.0 %
from stable catches.....	9.3 %
from rising catches.....	90.7 %

Major fishing countries ranked by 1990 production: USA:94.62%, Korea Rep:3.86%, China:1.01%, Canada:0.32%, Poland:0.19%.

Table 3.3.2

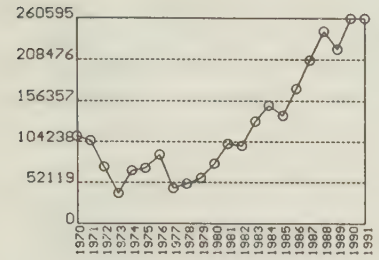
PACIFIC, NORTHEAST
Ranking order and proportions of cods, hakes, etc.,in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Alaska pollack(Walleye poll.)	1	827489	1 86.1%	1098000	1 79.5%
Pacific cod	2	76760	2 8.0%	111800	3 8.1%
North Pacific hake	3	57071	3 5.9%	171300	2 12.4%
Grenadiers	4	5	4 0.0%	0	4 0.0%
TOTALS		961325	100.0%	1381100	100.0%



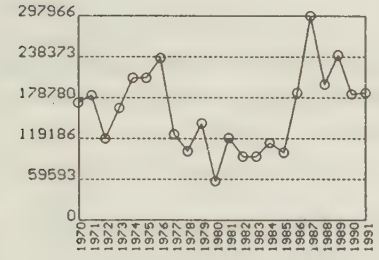
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Alaska pollack(Walleye poll.)
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 9.49 %
Rank..... 1 of 4 based on:1990
Percent to total..... 77.46 % , Cumulative: 77.46 %



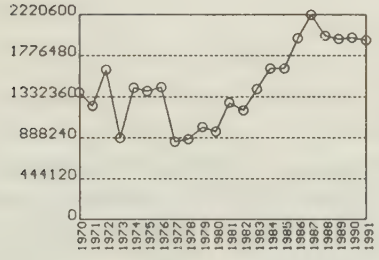
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific cod
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 25.65 %
Rank..... 2 of 4 based on:1990
Percent to total..... 13.20 % , Cumulative: 90.66 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....North Pacific hake
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 2.97 %
Rank..... 3 of 4 based on:1990
Percent to total..... 9.34 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CODS, HAKES, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 10.17 %
Rank..... 4 of 4 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.4 Production of redfishes, basses, congers, etc. (ISSCAAP GROUP 33).

Table 3.4.1

PACIFIC, NORTHEAST

Redfishes, basses, congers, etc. (ISSCAAP GROUP 33), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Scorpionfishes, nei	1	66225	35.2 %	Rising
Pacific ocean perch	2	49096	26.1 %	Declining
Sablefish	3	43316	23.0 %	Stable (-)
Atka mackerel	4	22456	11.9 %	Rising
Lingcod	5	7231	3.8 %	Rising
Striped bass	6	0	0.0 %	Declining
Porgies, seabreams, nei	7	0	0.0 %	Rising
Yellowtail rockfish	8	0	0.0 %	Declining
White croaker	9	0	0.0 %	Sharp rise
Grunts, sweetlips, nei	10	0	0.0 %	Sharp decl
Demersal percomorphs nei	11	0	0.0 %	Declining
TOTAL REDFISHES, BASSES, ETC.		188324	100.0 %	Declining

Proportion coming from declining catches.....	26.1 %
from stable catches.....	23.0 %
from rising catches.....	50.9 %

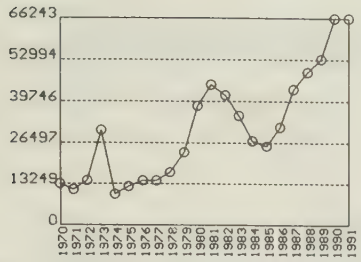
Major fishing countries ranked by 1990 production: USA:83.68%, Canada:16.26%, Poland:0.06%.

Table 3.4.2

PACIFIC, NORTHEAST

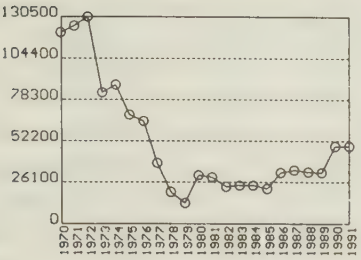
Ranking order and proportions of redfishes, basses, etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	-1980- CATCH (MT)	-1980- RANK AND PERCENT	-1970- CATCH (MT)	-1970- RANK AND PERCENT
Scorpionfishes, nei	1	38247	1 26.8%	13300	5 4.4%
Pacific ocean perch	2	30609	2 21.4%	120800	1 40.2%
Sablefish	3	17662	5 12.4%	49100	3 16.4%
Atka mackerel	4	29431	3 20.6%	11300	6 3.8%
Lingcod	5	4682	6 3.3%	4600	7 1.5%
Striped bass	6	0	7 0.0%	0	12 0.0%
Porgies, seabreams, nei	7	0	12 0.0%	0	11 0.0%
Yellowtail rockfish	8	0	10 0.0%	0	9 0.0%
White croaker	9	0	8 0.0%	0	8 0.0%
Grunts, sweetlips, nei	10	0	9 0.0%	79200	2 26.4%
Demersal percomorphs nei	11	22357	4 15.6%	22000	4 7.3%
TOTALS		142988	100.0%	300300	100.0%



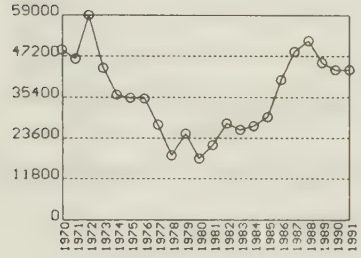
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Scorpionfishes, nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 25.99 %
Rank..... 1 of 6 based on:1990
Percent to total..... 35.17 % , Cumulative: 35.17 %



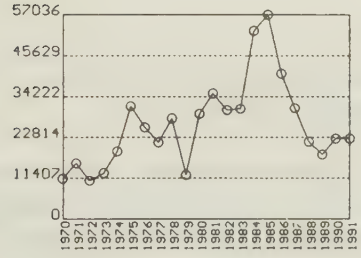
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific ocean perch
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend.....-26.40 %
Rank..... 2 of 6 based on:1990
Percent to total..... 26.07 % , Cumulative: 61.24 %



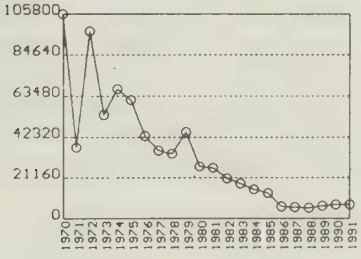
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sablefish
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... -0.44 %
Rank..... 3 of 6 based on:1990
Percent to total..... 23.00 % , Cumulative: 84.24 %



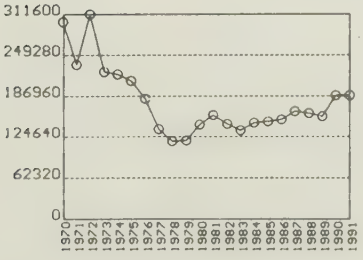
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Atka mackerel
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 10.89 %
Rank..... 4 of 6 based on:1990
Percent to total..... 11.92 % , Cumulative: 96.16 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER REDFISHES, BASSES, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-40.31 %
Rank..... 5 of 6 based on:1990
Percent to total..... 3.84 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL REDFISHES, BASSES, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... -9.16 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.5 Production of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34). Negligible.

3.6 Production of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35).

Table 3.6.1

PACIFIC, NORTHEAST
Herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Pacific herring	1	82050	99.9 %	Declining
Californian anchovy	2	50	0.1 %	Declining
Japanese pilchard	3	0	0.0 %	Sharp rise
TOTAL HERRINGS, SARDINES, ETC.		82100	100.0 %	Declining

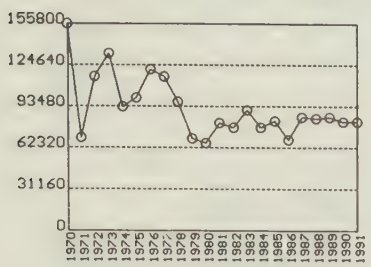
Proportion coming from declining catches.....	100.0 %
from stable catches.....	0.0 %
from rising catches.....	0.0 %

Major fishing countries ranked by 1990 production: USA:50.85%, Canada:49.15%.

Table 3.6.2

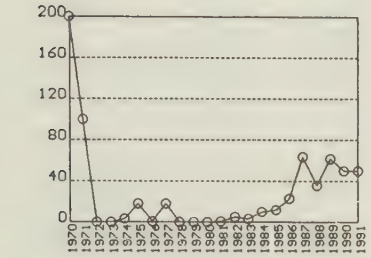
PACIFIC, NORTHEAST
Ranking order and proportions of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Pacific herring	1	65903	1 100.0%	155800	1 99.9%
Californian anchovy	2	0	2 0.0%	200	2 0.1%
Japanese pilchard	3	0	3 0.0%	0	3 0.0%
TOTALS		65903	100.0%	156000	100.0%



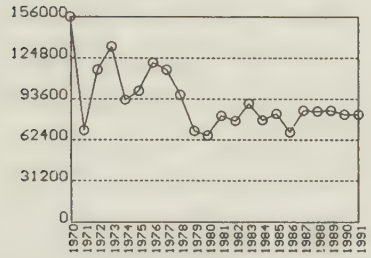
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific herring
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -7.78 %
Rank..... 1 of 3 based on:1990
Percent to total..... 99.94 % , Cumulative: 99.94 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Californian anchovy
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend.....-10.50 %
Rank..... 2 of 3 based on:1990
Percent to total..... 0.06 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL HERRINGS, SARDINES, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -7.78 %
Rank..... 3 of 3 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.7 Production of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36).

Table 3.7.1

PACIFIC, NORTHEAST
Tunas, bonitos, etc., ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Albacore	1	2932	90.2 %	Declining
Skipjack tuna	2	287	8.8 %	Declining
Swordfish	3	29	0.9 %	Sharp rise
Indo-Pacific blue marlin	4	4	0.1 %	Sharp rise
Frigate and bullet tunas	5	0	0.0 %	Rising
Northern bluefin tuna	6	0	0.0 %	Declining
Seerfishes nei	7	0	0.0 %	Rising
Bigeye tuna	8	0	0.0 %	Sharp rise
Indo-Pacific sailfish	9	0	0.0 %	Sharp rise
Tunas nei	10	0	0.0 %	Sharp rise
TOTAL TUNAS, BONITOS, ETC.		3252	100.0 %	Declining

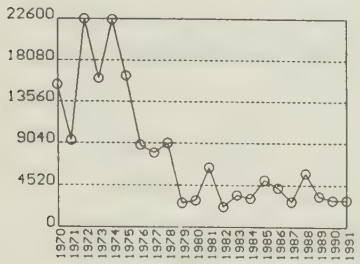
Proportion coming from declining catches.....	99.0 %
from stable catches.....	0.0 %
from rising catches.....	1.0 %

Major fishing countries ranked by 1990 production: USA:69.59%, Japan:22.05%, Canada:8.36%.

Table 3.7.2

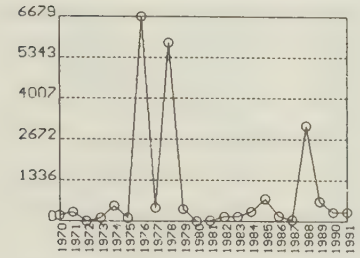
PACIFIC, NORTHEAST
Ranking order and proportions of tunas, bonitos, etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Albacore	1	2904	1 99.9%	15400	1 87.0%
Skipjack tuna	2	3	2 0.1%	200	3 1.1%
Swordfish	3	0	3 0.0%	0	4 0.0%
Indo-Pacific blue marlin	4	0	4 0.0%	0	5 0.0%
Frigate and bullet tunas	5	0	5 0.0%	0	6 0.0%
Northern bluefin tuna	6	0	6 0.0%	0	7 0.0%
Seerfishes nei	7	0	13 0.0%	0	12 0.0%
Bigeye tuna	8	0	7 0.0%	0	13 0.0%
Indo-Pacific sailfish	9	0	8 0.0%	0	10 0.0%
Tunas nei	10	0	9 0.0%	0	8 0.0%
TOTALS		2907	100.0%	17700	100.0%



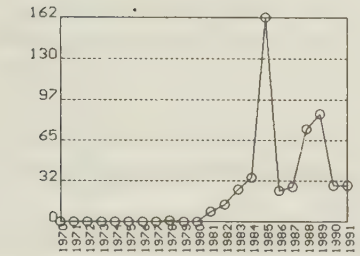
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Albacore
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 14 %
Trend.....-33.35 %
Rank..... 1 of 6 based on:1990
Percent to total..... 90.16 % , Cumulative: 90.16 %



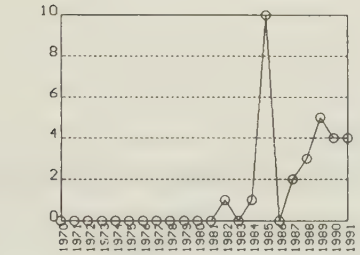
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skipjack tuna
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... -6.56 %
Rank..... 2 of 6 based on:1990
Percent to total..... 8.83 % , Cumulative: 98.99 %



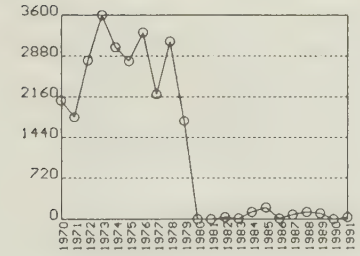
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Swordfish
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 52.55 %
Rank..... 3 of 6 based on:1990
Percent to total..... 0.89 % , Cumulative: 99.88 %



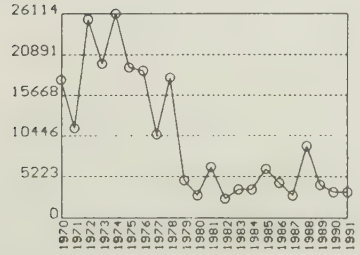
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indo-Pacific blue marlin
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 60.29 %
Rank..... 4 of 6 based on:1990
Percent to total..... 0.12 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER TUNAS, BONITOS, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-49.08 %
Rank.....
.....



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL TUNAS, BONITOS, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend.....-32.60 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.8 Production of mackerels,snoeks,cutlassfishes, etc. (ISSCAAP GROUP 37). Negligible.

3.9 Production of sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38).

Table 3.9.1

PACIFIC, NORTHEAST
Sharks, rays, etc. (ISSCAAP GROUP 38), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Picked(=Spiny)dogfish	1	3174	64.7 %	Rising
Dogfish sharks nei	2	1395	28.4 %	Rising
Skates and rays, nei	3	274	5.6 %	Stable (+)
Sharks, rays, skates, etc	4	63	1.3 %	Rising
Whip stingray	5	0	0.0 %	Rising
TOTAL SHARKS, RAYS, ETC.		4906	100.0 %	Rising

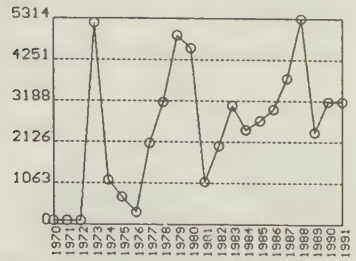
Proportion coming from declining catches.....	0.0 %
from stable catches.....	5.6 %
from rising catches.....	94.4 %

Major fishing countries ranked by 1990 production: Canada:67.57%, USA:31.57%, Japan:0.86%.

Table 3.9.2

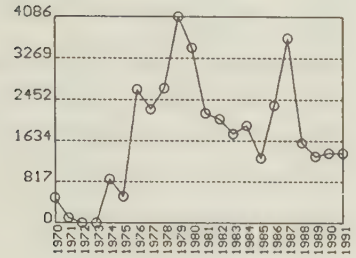
PACIFIC, NORTHEAST
Ranking order and proportions of sharks, rays, etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Picked(=Spiny)dogfish	1	4545	1 44.9%	100	3 10.0%
Dogfish sharks nei	2	3478	2 34.4%	500	1 50.0%
Skates and rays, nei	3	2072	3 20.5%	400	2 40.0%
Sharks, rays, skates, etc	4	31	4 0.3%	0	4 0.0%
Whip stingray	5	0	5 0.0%	0	5 0.0%
TOTALS		10126	100.0%	1000	100.0%



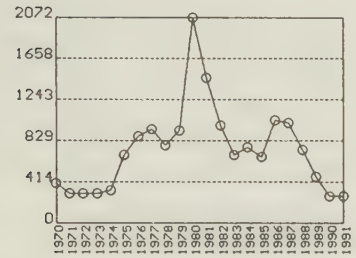
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Picked(=Spiny)dogfish
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 18.64 %
Rank..... 1 of 5 based on:1990
Percent to total..... 64.70 % , Cumulative: 64.70 %



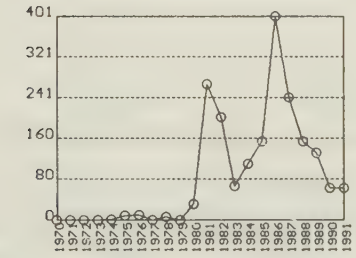
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Dogfish sharks nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 13.66 %
Rank..... 2 of 5 based on:1990
Percent to total..... 28.43 % , Cumulative: 93.13 %



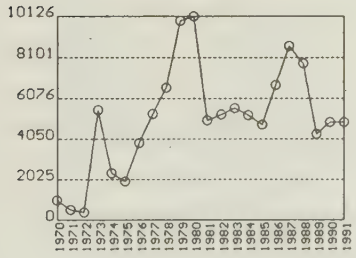
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skates and rays, nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 3.96 %
Rank..... 3 of 5 based on:1990
Percent to total..... 5.58 % , Cumulative: 98.72 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sharks, rays, skates, etc
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 40.28 %
Rank..... 4 of 5 based on:1990
Percent to total..... 1.28 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL SHARKS, RAYS, ETC.
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 15.14 %
Rank..... 5 of 5 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.10 Production of crustaceans (ISSCAAP GROUPS 41-47).

Table 3.10.1

PACIFIC, NORTHEAST
Crustaceans (ISSCAAP GROUPS 41-47), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Pacific snow crabs	1	96795	62.0 %	Rising
Pacific shrimps	2	25562	16.4 %	Declining
Dungeness crab	3	15869	10.2 %	Stable (+)
King crabs	4	15385	9.9 %	Declining
Natantian decapods nei	5	2465	1.6 %	Rising
Marine crabs nei	6	14	0.0 %	Rising
Marine crustaceans nei	7	0	0.0 %	Sharp decl
TOTAL CRUSTACEANS		156090	100.0 %	Declining

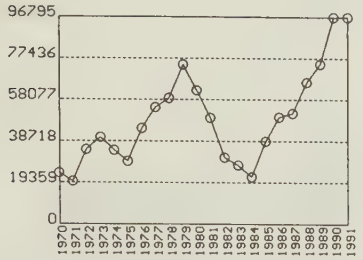
Proportion coming from declining catches.....	26.2 %
from stable catches.....	10.2 %
from rising catches.....	63.6 %

Major fishing countries ranked by 1990 production: USA:97.07%, Canada:2.93%.

Table 3.10.2

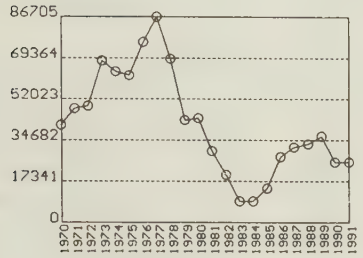
PACIFIC, NORTHEAST
Ranking order and proportions of crustaceans in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Pacific snow crabs	1	62285	2 29.6%	23900	4 18.0%
Pacific shrimps	2	43967	3 20.9%	40900	1 30.8%
Dungeness crab	3	18639	4 8.9%	24500	3 18.5%
King crabs	4	84198	1 40.0%	35600	2 26.8%
Natantian decapods nei	5	656	6 0.3%	700	6 0.5%
Marine crabs nei	6	842	5 0.4%	0	7 0.0%
Marine crustaceans nei	7	0	7 0.0%	7100	5 5.4%
TOTALS		210587	100.0%	132700	100.0%



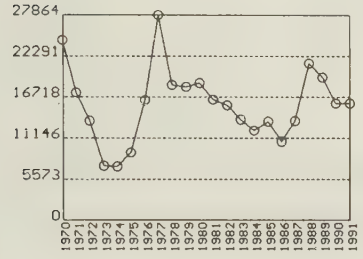
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific snow crabs
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 15.76 %
Rank..... 1 of 6 based on:1990
Percent to total..... 62.01 % , Cumulative: 62.01 %



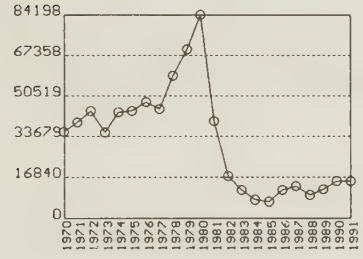
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific shrimps
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend.....-17.92 %
Rank..... 2 of 6 based on:1990
Percent to total..... 16.38 % , Cumulative: 78.39 %



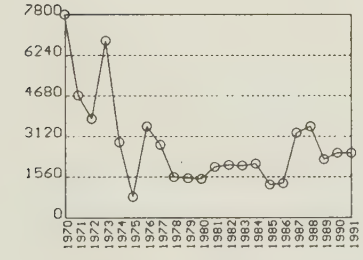
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Dungeness crab
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 0.36 %
Rank..... 3 of 6 based on:1990
Percent to total..... 10.17 % , Cumulative: 88.56 %



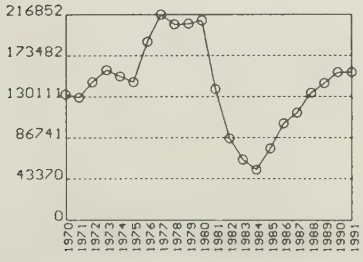
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....King crabs
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend.....-22.31 %
Rank..... 4 of 6 based on:1990
Percent to total..... 9.86 % , Cumulative: 98.41 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CRUSTACEANS
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-16.73 %
Rank..... 5 of 6 based on:1990
Percent to total..... 1.59 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CRUSTACEANS
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... -5.16 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

3.11 Production of molluscs (ISSCAAP GROUPS 51-58).

Table 3.11.1

PACIFIC, NORTHEAST
Molluscs (ISSCAAP GROUPS 51-58), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Squids nei	1	43676	41.8 %	Sharp rise
Pacific cupped oyster	2	41450	39.7 %	Stable (+)
Geoduck clam	3	7199	6.9 %	Rising
Marine molluscs nei	4	3942	3.8 %	Rising
Clams nei	5	3001	2.9 %	Rising
Giant Pacific scallop	6	2415	2.3 %	Stable (-)
Butter clam	7	2396	2.3 %	Rising
Abalones nei	8	188	0.2 %	Stable (+)
Octopuses	9	182	0.2 %	Rising
Sea mussels nei	10	39	0.0 %	Sharp rise
Olympia flat oyster	11	0	0.0 %	Sharp decl
Pacific razor clam	12	0	0.0 %	Sharp decl
TOTAL MOLLUSCS		104488	100.0 %	Rising

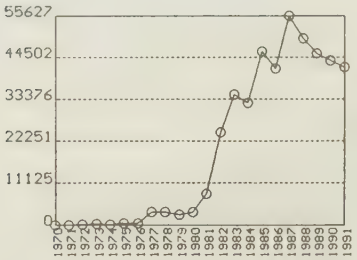
Proportion coming from declining catches.....	0.0 %
from stable catches.....	42.2 %
from rising catches.....	57.8 %

Major fishing countries ranked by 1990 production: USA:47.31%, Japan:37.70%, Canada:10.89%, Korea Rep:4.09%.

Table 3.11.2

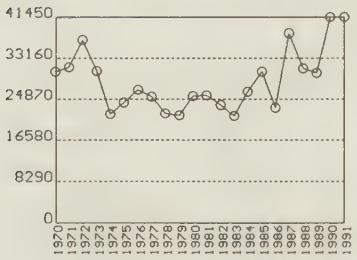
PACIFIC, NORTHEAST
Ranking order and proportions of molluscs (ISSCAAP GROUPS 51-58), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Squids nei	1	3508	3 8.3%	0	12 0.0%
Pacific cupped oyster	2	25558	1 60.6%	30400	1 70.5%
Geoduck clam	3	3300	4 7.8%	0	9 0.0%
Marine molluscs nei	4	818	7 1.9%	5100	2 11.8%
Clams nei	5	614	8 1.5%	900	5 2.1%
Giant Pacific scallop	6	2461	5 5.8%	5100	3 11.8%
Butter clam	7	4568	2 10.8%	1100	4 2.6%
Abalones nei	8	541	9 1.3%	0	10 0.0%
Octopuses	9	827	6 2.0%	0	8 0.0%
Sea mussels nei	10	0	10 0.0%	0	11 0.0%
Olympia flat oyster	11	0	11 0.0%	100	7 0.2%
Pacific razor clam	12	0	12 0.0%	400	6 0.9%
TOTALS		42195	100.0%	43100	100.0%



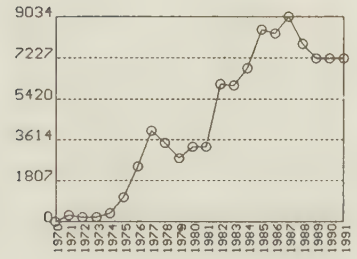
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Squids nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 51.76 %
Rank..... 1 of 12 based on:1990
Percent to total..... 41.80 % , Cumulative: 41.80 %



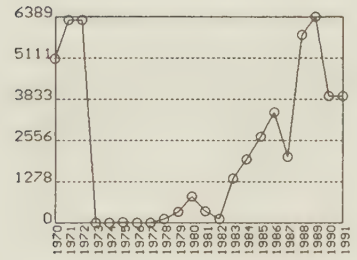
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific cupped oyster
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 3.86 %
Rank..... 2 of 12 based on:1990
Percent to total..... 39.67 % , Cumulative: 81.47 %



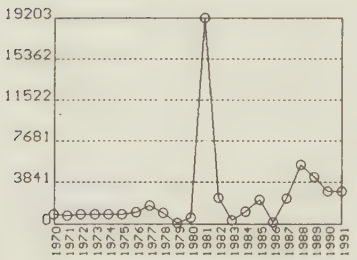
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Geoduck clam
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 36.59 %
Rank..... 3 of 12 based on:1990
Percent to total..... 6.89 % , Cumulative: 88.36 %



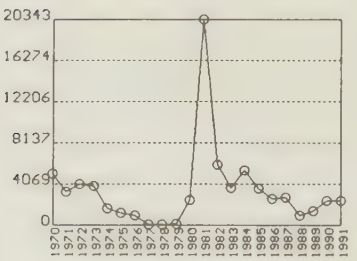
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine molluscs nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 10.85 %
Rank..... 4 of 12 based on:1990
Percent to total..... 3.77 % , Cumulative: 92.13 %



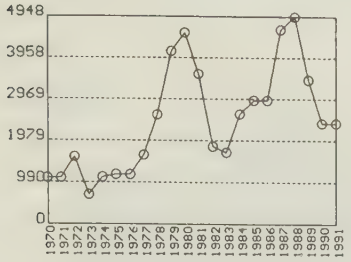
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Clams nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 20.48 %
Rank..... 5 of 12 based on:1990
Percent to total..... 2.87 % , Cumulative: 95.00 %



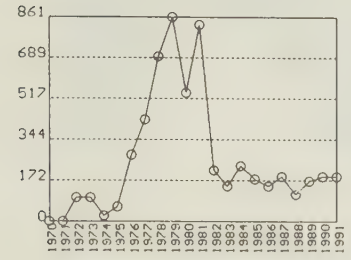
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Giant Pacific scallop
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... -1.12 %
Rank..... 6 of 12 based on:1990
Percent to total..... 2.31 % , Cumulative: 97.32 %



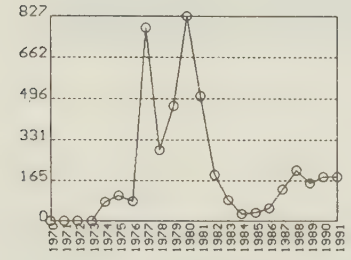
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Butter clam
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 17.81 %
Rank..... 7 of 12 based on:1990
Percent to total..... 2.29 % , Cumulative: 99.61 %



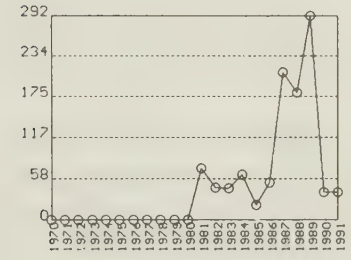
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Abalones nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 4.03 %
Rank..... 8 of 12 based on:1990
Percent to total..... 0.18 % , Cumulative: 99.79 %



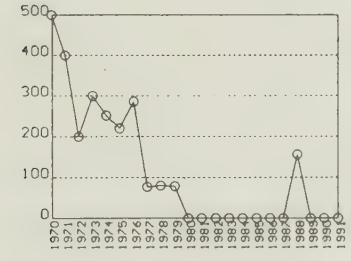
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Octopuses
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 5.19 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.17 % , Cumulative: 99.96 %



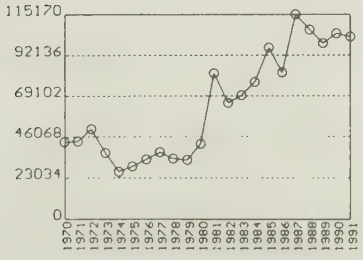
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sea mussels nei
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 55.73 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.04 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MOLLUSCS
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

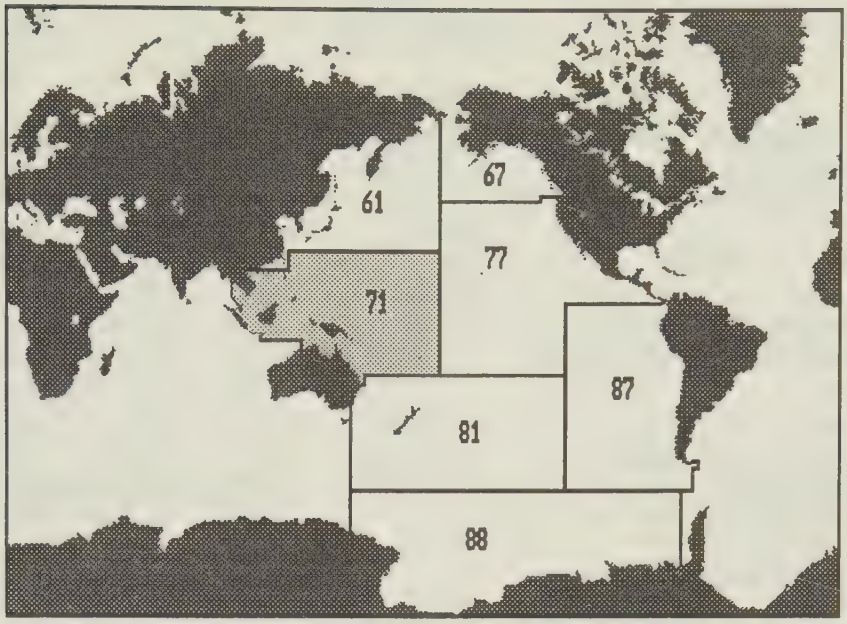
Fluctuation..... 7 %
Trend.....-56.44 %
Rank.....
.....



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MOLLUSCS
Area.....PACIFIC, NORTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 22.06 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4. PACIFIC, WESTERN CENTRAL (Area 71)



Major producers of fish, crustaceans and molluscs (1990 ranking): Philippines:28.84%, Indonesia:28.84%, Thailand:21.43%, Japan:4.98%, Malaysia:3.54%, Korea Rep:3.49%, USA:2.85%, Viet Nam:1.82%, Other nei A:1.57%, Solomon Is:0.73%, Fiji:0.50%, Kiribati:0.49%, Australia:0.30%, Cambodia:0.20%, Singapore:0.18%, USSR:0.10%, NewCaledonia:0.05%, Vanuatu:0.03%, OTHER COUNTRIES:0.06%.

Major species and percentages based on 1990 ranking: Skipjack tuna:12.75%, Scads:7.04%, Yellowfin tuna:5.84%, Sardinellas nei:4.78%, Stolephorus anchovies:3.82%, Indian mackerels nei:3.80%, Tuna-like fishes nei:2.72%, Carangids nei:2.69%, Natantian decapods nei:2.45%, Frigate and bullet tunas:2.35%, Goldstripe sardinella:2.18%, Bali sardinella:1.86%, Ponyfishes(=Slipmouths)nei:1.85%, Common squids:1.80%, Indian mackerel:1.69%, Threadfin breams:1.67%, Anchovies nei:1.65%, Penaeus shrimps nei:1.56%, Giant tiger prawn:1.50%, Short neck clams:1.47%, Longtail tuna:1.43%, Green mussel:1.31%, Cuttlefishes, bobtail squids:1.16%, Kawakawa:1.09%, Narrow-barred Spanish mackerel:1.05%, Banana prawn:0.93%, Sharks, rays, skates, etc:0.91%, Sea catfishes nei:0.85%, Sergestid shrimps:0.80%, Skates and rays, nei:0.78%, Snappers nei:0.77%, Bigeye scad:0.74%, Croakers, drums nei:0.74%, Percoids nei:0.73%, Mullets nei:0.70%, Rainbow sardine:0.65%, Torpedo scad:0.64%, Bigeye tuna:0.63%, Marine crabs nei:0.61%, Sand crab:0.60%, Needlefishes:0.59%, Marine molluscs nei:0.57%, Lizardfishes nei:0.55%, Flyingfishes nei:0.55%, Barracudas:0.52%, Indian scad:0.50%, Hairtails, cutlassfishes, nei:0.50%, Wolf-herrings:0.47%, OTHER SPECIES:13.18%.

4.1 Production of diadromous fish (ISSCAAP GROUPS 21-25).

Table 4.1.1

PACIFIC, WESTERN CENTRAL
Diadromous fish (ISSCAAP GROUPS 21-25), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Giant sea perch(=Barramundi)	1	21267	62.9 %	Rising
Milkfish	2	5638	16.7 %	Sharp rise
Toli shad	3	3420	10.1 %	Rising
Chacunda gizzard shad	4	1184	3.5 %	Stable (-)
Indian pellona	5	930	2.8 %	Declining
Diadromous clupeoids nei	6	800	2.4 %	Declining
Big eye ilisha	7	601	1.8 %	Sharp rise
TOTAL DIADROMOUS		33840	100.0 %	Rising

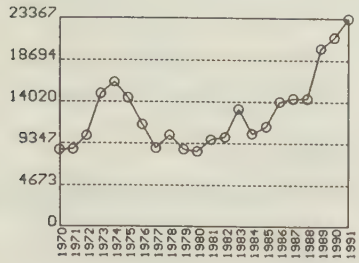
Proportion coming from declining catches.....	5.1 %
from stable catches.....	3.5 %
from rising catches.....	91.4 %

Major fishing countries ranked by 1990 production: Indonesia:67.73%, Kiribati:13.83%, Malaysia:6.25%, Philippines:5.90%, Australia:3.95%, Fiji:1.23%, Singapore:1.02%, Papua N Guin:0.09%.

Table 4.1.2

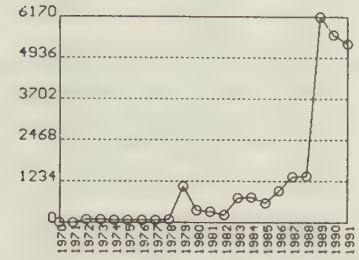
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of diadromous species in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Giant sea perch(=Barramundi)	1	8463	1 66.1%	8600	1 64.2%
Milkfish	2	379	5 3.0%	0	6 0.0%
Toli shad	3	1422	3 11.1%	800	5 6.0%
Chacunda gizzard shad	4	581	4 4.5%	1300	3 9.7%
Indian pellona	5	1755	2 13.7%	1000	4 7.5%
Diadromous clupeoids nei	6	200	6 1.6%	1700	2 12.7%
Big eye ilisha	7	0	7 0.0%	0	7 0.0%
TOTALS		12800	100.0%	13400	100.0%



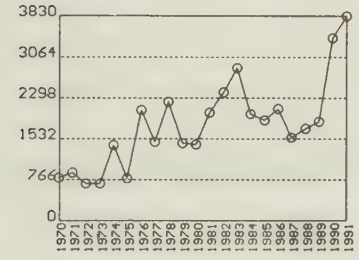
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Giant sea perch(=Barramundi)
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 10.89 %
Rank..... 1 of 6 based on:1990
Percent to total..... 62.85 % , Cumulative: 62.85 %



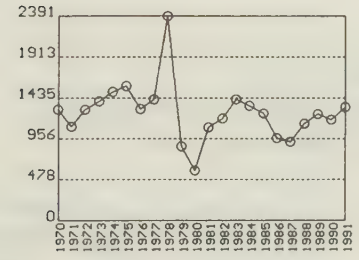
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Milkfish
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 64.28 %
Rank..... 2 of 6 based on:1990
Percent to total..... 16.66 % , Cumulative: 79.51 %



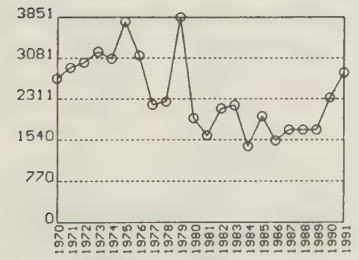
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Toli shad
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 18.78 %
Rank..... 3 of 6 based on:1990
Percent to total..... 10.11 % , Cumulative: 89.61 %



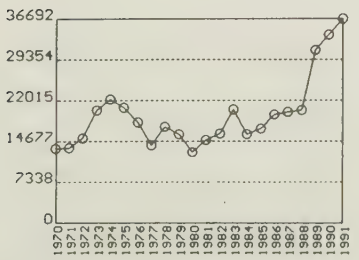
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chacunda gizzard shad
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... -3.37 %
Rank..... 4 of 6 based on:1990
Percent to total..... 3.50 % , Cumulative: 93.11 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER DIADROMOUS
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -9.45 %
Rank..... 5 of 6 based on:1990
Percent to total..... 6.89 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL DIADROMOUS
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 11.35 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.2 Production of flounders, halibuts, soles, etc. (ISSCAAP GROUP 31)

Table 4.2.1

PACIFIC, WESTERN CENTRAL
Flounders, halibuts, soles, etc., (ISSCAAP GROUP 31) ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Tonguefishes nei	1	6500	45.5 %	Rising
Indian halibut	2	4857	34.0 %	Rising
Flatfishes nei	3	2927	20.5 %	Declining
Lefteye flounders	4	0	0.0 %	Sharp rise
Bastard halibuts	5	0	0.0 %	Sharp rise
TOTAL FLOUNDERS, SOLES, ETC.		14284	100.0 %	Stable (-)

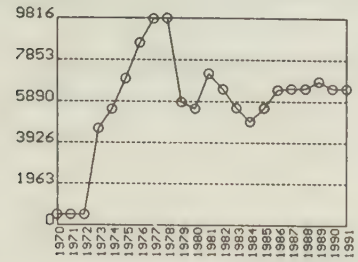
Proportion coming from declining catches.....	20.5 %
from stable catches.....	0.0 %
from rising catches.....	79.5 %

Major fishing countries ranked by 1990 production: Thailand:64.20%, Indonesia:16.76%, Philippines:13.72%, Malaysia:5.32%.

Table 4.2.2

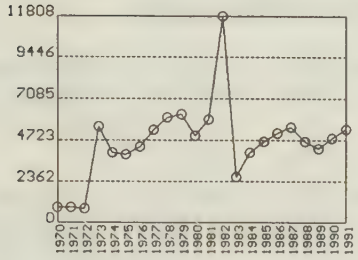
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of flounders, halibuts, soles, etc., (ISSCAAP GROUP 31), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Tonguefishes nei	1	5558	1 42.9%	500	3 3.3%
Indian halibut	2	4971	2 38.4%	900	2 5.8%
Flatfishes nei	3	2425	3 18.7%	14000	1 90.9%
Lefteye flounders	4	0	4 0.0%	0	4 0.0%
Bastard halibuts	5	0	5 0.0%	0	5 0.0%
TOTALS		12954	100.0%	15400	100.0%



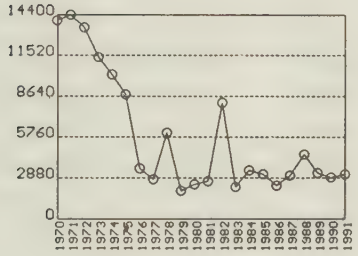
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tonguefishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 10.39 %
Rank..... 1 of 4 based on:1990
Percent to total..... 45.51 % , Cumulative: 45.51 %



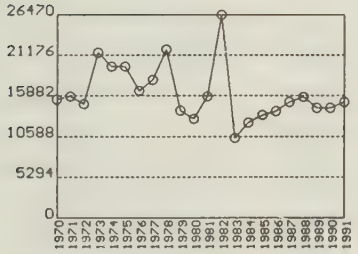
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indian halibut
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 10.33 %
Rank..... 2 of 4 based on:1990
Percent to total..... 34.00 % , Cumulative: 79.51 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flatfishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-30.05 %
Rank..... 3 of 4 based on:1990
Percent to total..... 20.49 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL FLOUNDERS, SOLES, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -4.13 %
Rank..... 4 of 4 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.3 Production of cods,hakes,haddocks, etc. (ISSCAAP GROUP 32). No catches reported.

4.4 Production of redfishes, basses, congers, etc. (ISSCAAP GROUP 33).

Table 4.4.1

PACIFIC, WESTERN CENTRAL
Top 22 species of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Ponyfishes(=Slipmouths)nei	1	103316	15.1 %	Rising
Threadfin breams	2	93237	13.6 %	Rising
Sea catfishes nei	3	47192	6.9 %	Rising
Snappers nei	4	42682	6.2 %	Rising
Croakers, drums nei	5	41094	6.0 %	Stable (+)
Percoids nei	6	40867	6.0 %	Stable (+)
Lizardfishes nei	7	30560	4.5 %	Stable (-)
Snappers, jobfishes, nei	8	25085	3.7 %	Rising
Surmullets(=Red mullets)	9	24610	3.6 %	Rising
Groupers, seabasses nei	10	23970	3.5 %	Rising
Fusiliers	11	23558	3.4 %	Stable (-)
Bigeyes nei	12	22544	3.3 %	Rising
Emperors(=Scavengers)	13	17761	2.6 %	Rising
Sillago-whitings	14	14146	2.1 %	Rising
Spinefeet(=Rabbitfishes)	15	14139	2.1 %	Rising
Groupers nei	16	13984	2.0 %	Declining
Bombay-duck	17	12677	1.9 %	Rising
Mojarras(=Silver-biddies)	18	11510	1.7 %	Rising
Demersal percomorphs nei	19	11507	1.7 %	Rising
Wrasses, hogfishes, etc	20	10944	1.6 %	Rising
Goatfishes	21	9699	1.4 %	Rising
Grunts, sweetlips, nei	22	8381	1.2 %	Rising
OTHER REDFISHES, BASSES, ETC.	23	43046	6.3 %	Rising
TOTAL REDFISHES, BASSES, ETC.		686509	100.0 %	Rising

Proportion coming from declining catches.....	2.0 %
from stable catches.....	19.8 %
from rising catches.....	78.1 %

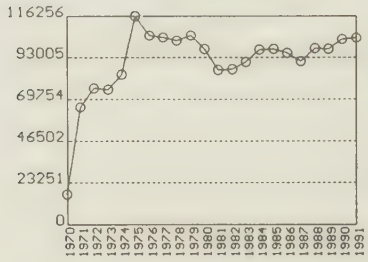
Major fishing countries ranked by 1990 production: Philippines:45.10%, Indonesia:31.96%, Thailand:12.16%, Malaysia:6.18%, Fiji:1.63%, Kiribati:1.10%, Korea Rep:1.00%, Singapore:0.50%, USSR:0.28%, NewCaledonia:0.07%, Australia:0.01%.

Table 4.4.2

PACIFIC, WESTERN CENTRAL

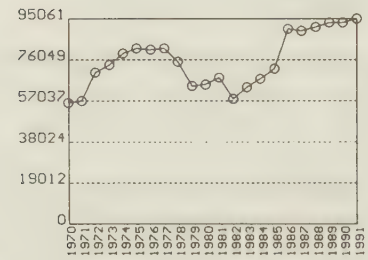
Ranking order and proportions of top 22 species of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Ponyfishes(=Slipmouths)nei	1	97799	1 18.8%	16800	9 4.8%
Threadfin breams	2	64598	2 12.4%	56300	1 16.2%
Sea catfishes nei	3	29865	4 5.7%	30400	3 8.8%
Snappers nei	4	21205	9 4.1%	13800	11 4.0%
Croakers, drums nei	5	41419	3 8.0%	23700	5 6.8%
Percoids nei	6	26237	7 5.0%	33400	2 9.6%
Lizardfishes nei	7	28825	6 5.5%	27200	4 7.8%
Snappers, jobfishes, nei	8	25300	8 4.9%	19100	8 5.5%
Surmullets(=Red mullets)	9	15292	13 2.9%	3900	20 1.1%
Groupers, seabasses nei	10	20048	10 3.9%	15300	10 4.4%
Fusiliers	11	29813	5 5.7%	19700	6 5.7%
Bigeyes nei	12	15886	11 3.1%	11100	12 3.2%
Emperors(=Scavengers)	13	15491	12 3.0%	4200	17 1.2%
Sillago-whitings	14	8394	15 1.6%	4200	18 1.2%
Spinefeet(=Rabbitfishes)	15	8215	16 1.6%	5900	14 1.7%
Groupers nei	16	6680	18 1.3%	19400	7 5.6%
Bombay-duck	17	8459	14 1.6%	200	36 0.1%
Mojarras(=Silver-biddies)	18	4363	23 0.8%	3200	24 0.9%
Demersal percomorphs nei	19	7522	17 1.4%	3400	22 1.0%
Wrasses, hogfishes, etc	20	5426	21 1.0%	3500	21 1.0%
Goatfishes	21	6300	19 1.2%	6000	13 1.7%
Grunts, sweetlips, nei	22	3931	25 0.8%	700	29 0.2%
TOTALS		520644	100.0%	347200	100.0%



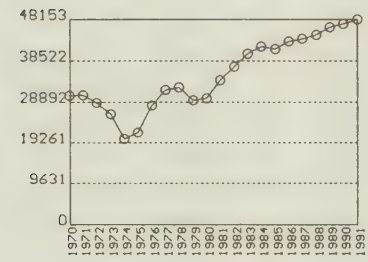
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Ponyfishes(=Slipmouths)nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 6.28 %
Rank..... 1 of 24 based on:1990
Percent to total..... 15.05 % , Cumulative: 15.05 %



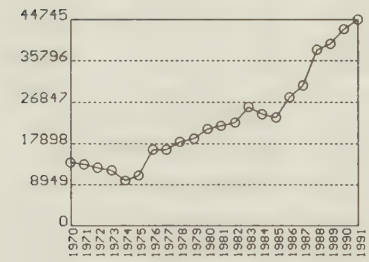
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Threadfin breams
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 5.58 %
Rank..... 2 of 24 based on:1990
Percent to total..... 13.58 % , Cumulative: 28.63 %



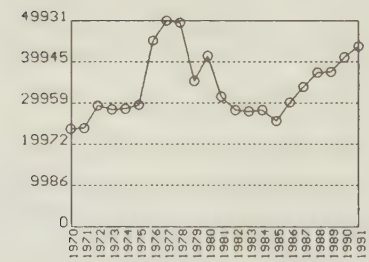
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sea catfishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 11.55 %
Rank..... 3 of 24 based on:1990
Percent to total..... 6.87 % , Cumulative: 35.50 %



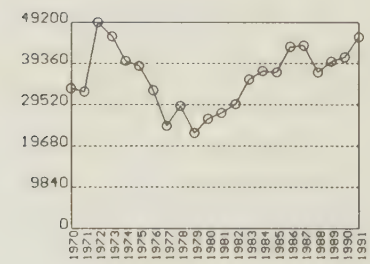
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Snappers nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 22.89 %
Rank..... 4 of 24 based on:1990
Percent to total..... 6.22 % , Cumulative: 41.72 %



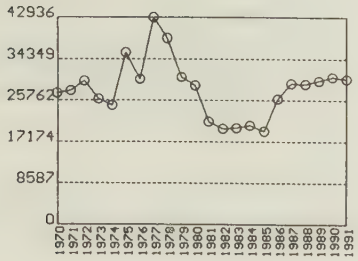
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Croakers, drums nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 3.63 %
Rank..... 5 of 24 based on:1990
Percent to total..... 5.99 % , Cumulative: 47.71 %



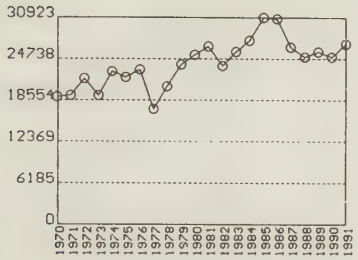
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Percoids nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 2.24 %
Rank..... 6 of 24 based on:1990
Percent to total..... 5.95 % , Cumulative: 53.66 %



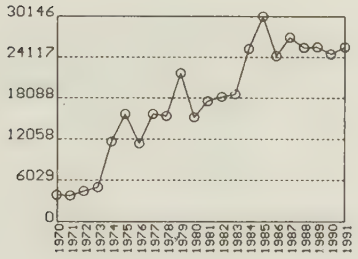
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Lizardfishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -1.91 %
Rank..... 7 of 24 based on:1990
Percent to total..... 4.45 % , Cumulative: 58.11 %



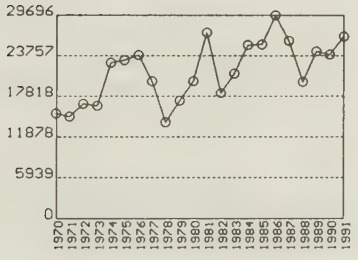
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Snappers, jobfishes, nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 6.13 %
Rank..... 8 of 24 based on:1990
Percent to total..... 3.65 % , Cumulative: 61.77 %



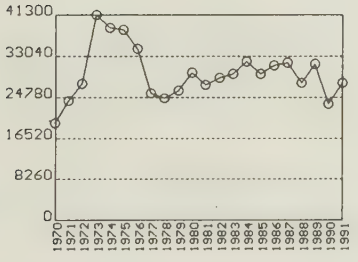
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Surmullets(=Red mullets)
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 23.15 %
Rank..... 9 of 24 based on:1990
Percent to total..... 3.58 % , Cumulative: 65.35 %



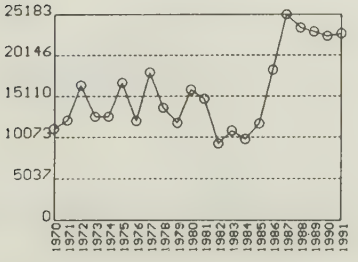
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Groupers, seabasses nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... 7.42 %
Rank..... 10 of 24 based on:1990
Percent to total..... 3.49 % , Cumulative: 68.84 %



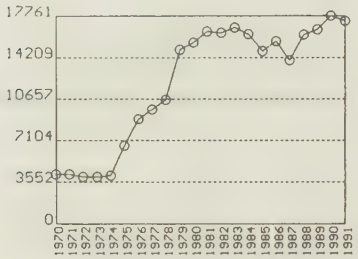
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Fusiliers
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -0.81 %
Rank..... 11 of 24 based on:1990
Percent to total..... 3.43 % , Cumulative: 72.27 %



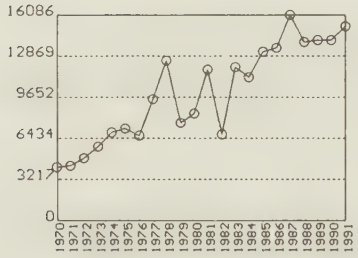
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeyes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 10.32 %
Rank..... 12 of 24 based on:1990
Percent to total..... 3.28 % , Cumulative: 75.56 %



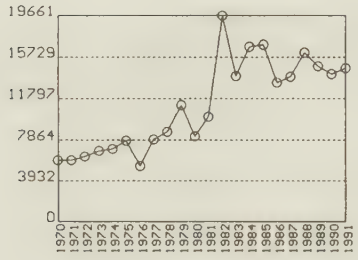
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Emperors(=Scavengers)
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 21.17 %
Rank..... 13 of 24 based on:1990
Percent to total..... 2.59 % , Cumulative: 78.15 %



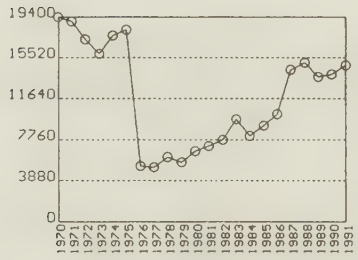
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sillago-whitings
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 18.87 %
Rank..... 14 of 24 based on:1990
Percent to total..... 2.06 % , Cumulative: 80.21 %



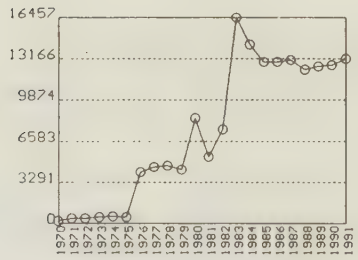
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Spinefeet(=Rabbitfishes)
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 17.66 %
Rank..... 15 of 24 based on:1990
Percent to total..... 2.06 % , Cumulative: 82.27 %



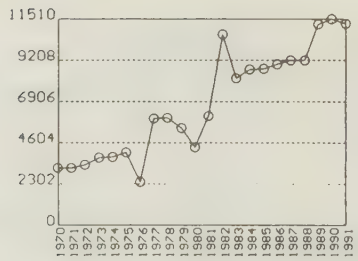
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Groupers nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... -5.26 %
Rank..... 16 of 24 based on:1990
Percent to total..... 2.04 % , Cumulative: 84.30 %



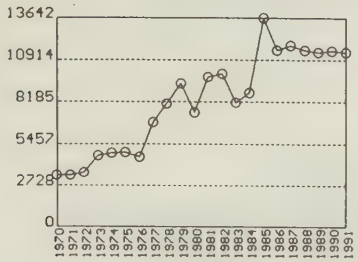
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bombay-duck
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 37.65 %
Rank..... 17 of 24 based on:1990
Percent to total..... 1.85 % , Cumulative: 86.15 %



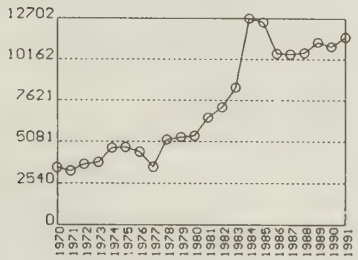
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mojarras(=Silver-biddies)
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 22.41 %
Rank..... 18 of 24 based on:1990
Percent to total..... 1.68 % , Cumulative: 87.83 %



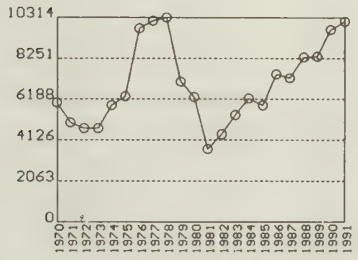
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Demersal percomorphs nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 19.73 %
Rank..... 19 of 24 based on:1990
Percent to total..... 1.68 % , Cumulative: 89.50 %



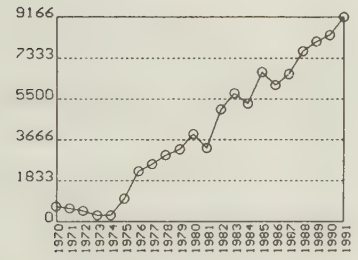
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Wrasses, hogfishes, etc
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 22.82 %
Rank..... 20 of 24 based on:1990
Percent to total..... 1.59 % , Cumulative: 91.10 %



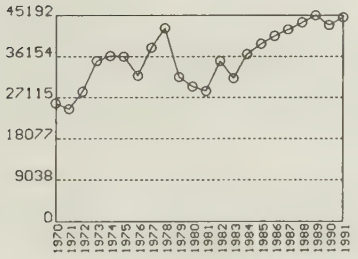
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Goatfishes
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 6.38 %
Rank..... 21 of 24 based on:1990
Percent to total..... 1.41 % , Cumulative: 92.51 %



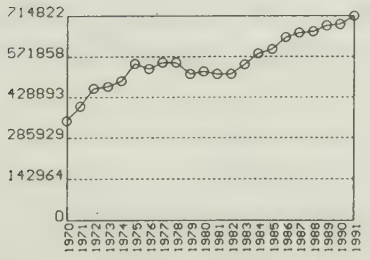
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Grunts, sweetlips, nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 37.46 %
Rank..... 22 of 24 based on:1990
Percent to total..... 1.22 % , Cumulative: 93.73 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER REDFISHES, BASSES, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 7.13 %
Rank..... 23 of 24 based on:1990
Percent to total..... 6.26 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL REDFISHES, BASSES, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 8.54 %
Rank..... 24 of 24 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.5 Production of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34).

Table 4.5.1

PACIFIC, WESTERN CENTRAL
Jacks, mullets, sauries, etc. (ISSCAAP GROUP 34),
ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Scads	1	392828	43.1 %	Rising
Carangids nei	2	149889	16.5 %	Rising
Bigeye scad	3	41255	4.5 %	Declining
Mullets nei	4	39033	4.3 %	Rising
Torpedo scad	5	35631	3.9 %	Rising
Needlefishes	6	32710	3.6 %	Rising
Flyingfishes nei	7	30453	3.3 %	Rising
Barracudas	8	29118	3.2 %	Rising
Indian scad	9	28070	3.1 %	Stable (-)
Jacks, crevalles, nei	10	23630	2.6 %	Rising
Threadfins, tasselfishes nei	11	19524	2.1 %	Declining
Black pomfret	12	17736	2.0 %	Rising
Queenfishes	13	14033	1.5 %	Rising
Silver pomfret	14	13681	1.5 %	Stable (+)
Pelagic percomorphs nei	15	10016	1.1 %	Rising
Rainbow runner	16	10000	1.1 %	Rising
Yellowstripe scad	17	8600	0.9 %	Rising
Halfbeaks nei	18	6811	0.8 %	Rising
Butterfishes, silver pomfrets	19	3844	0.4 %	Declining
Silversides(=Sand smelts)	20	3088	0.3 %	Rising
Cobia	21	719	0.1 %	Rising
Common dolphinfish	22	546	0.1 %	Rising
Jack and horse mackerels nei	23	53	0.0 %	Rising
Japanese scad	24	20	0.0 %	Sharp rise
Amberjacks nei	25	5	0.0 %	Rising
Pacific saury	26	0	0.0 %	Rising
Bluefish	27	0	0.0 %	Declining
TOTAL JACKS, MULLETS, ETC.		911293	100.0 %	Rising

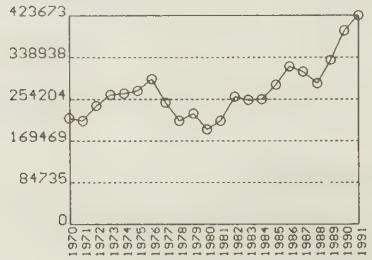
Proportion coming from declining catches.....	7.1 %
from stable catches.....	4.6 %
from rising catches.....	88.3 %

Major fishing countries ranked by 1990 production: Philippines:45.41%, Indonesia:38.63%, Thailand:9.51%, Malaysia:5.18%, Kiribati:0.53%, Fiji:0.46%, Australia:0.12%, Singapore:0.12%, NewCaledonia:0.02%, Japan:0.01%, Korea Rep:0.01%.

Table 4.5.2

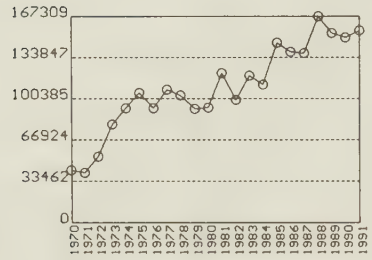
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Scads	1	193245	1 33.0%	215800	1 45.9%
Carangids nei	2	93191	2 15.9%	42300	2 9.0%
Bigeye scad	3	47219	3 8.1%	39900	3 8.5%
Mullets nei	4	30178	5 5.2%	20300	5 4.3%
Torpedo scad	5	22342	7 3.8%	14600	8 3.1%
Needlefishes	6	21274	8 3.6%	17200	7 3.7%
Flyingfishes nei	7	29747	6 5.1%	23600	4 5.0%
Barracudas	8	14357	10 2.5%	9200	12 2.0%
Indian scad	9	42311	4 7.2%	9800	11 2.1%
Jacks, crevalles, nei	10	19374	9 3.3%	8000	13 1.7%
Threadfins, tasselfishes nei	11	13815	11 2.4%	18300	6 3.9%
Black pomfret	12	7951	13 1.4%	13000	10 2.8%
Queenfishes	13	4983	18 0.9%	2200	19 0.5%
Silver pomfret	14	7321	16 1.3%	13700	9 2.9%
Pelagic percomorphs nei	15	7764	14 1.3%	3000	17 0.6%
Rainbow runner	16	7444	15 1.3%	3800	16 0.8%
Yellowstripe scad	17	10127	12 1.7%	6000	14 1.3%
Halfbeaks nei	18	4364	19 0.8%	2800	18 0.6%
Butterfishes, silver pomfrets	19	6474	17 1.1%	5000	15 1.1%
Silversides(=Sand smelts)	20	1120	20 0.2%	900	20 0.2%
Cobia	21	395	22 0.1%	300	22 0.1%
Common dolphinfish	22	522	21 0.1%	100	23 0.0%
Jack and horse mackerels nei	23	0	27 0.0%	0	27 0.0%
Japanese scad	24	0	25 0.0%	0	25 0.0%
Amberjacks nei	25	8	24 0.0%	0	24 0.0%
Pacific saury	26	0	26 0.0%	0	26 0.0%
Bluefish	27	176	23 0.0%	300	21 0.1%
TOTALS		585702	100.0%	470100	100.0%



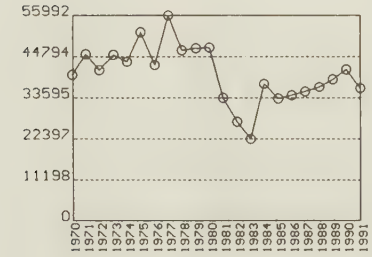
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Scads
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 8.09 %
Rank..... 1 of 12 based on:1990
Percent to total..... 43.11 % , Cumulative: 43.11 %



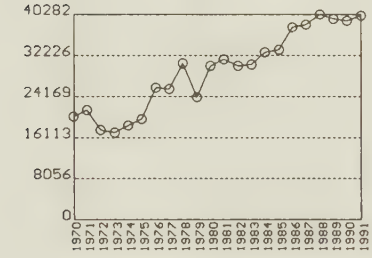
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Carangids nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 16.42 %
Rank..... 2 of 12 based on:1990
Percent to total..... 16.45 % , Cumulative: 59.55 %



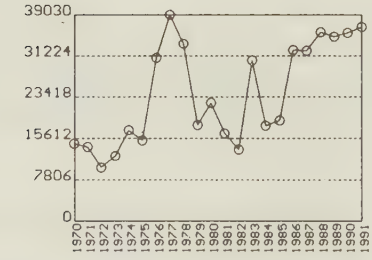
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeye scad
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -5.07 %
Rank..... 3 of 12 based on:1990
Percent to total..... 4.53 % , Cumulative: 64.08 %



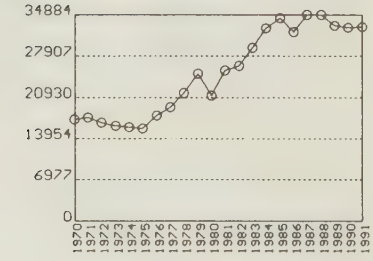
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mullets nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 13.84 %
Rank..... 4 of 12 based on:1990
Percent to total..... 4.28 % , Cumulative: 68.36 %



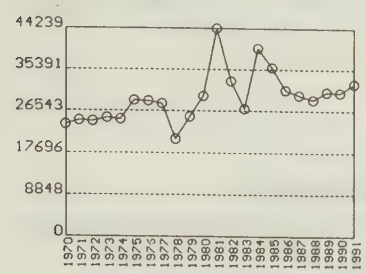
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Torpedo scad
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 14.21 %
Rank..... 5 of 12 based on:1990
Percent to total..... 3.91 % , Cumulative: 72.27 %



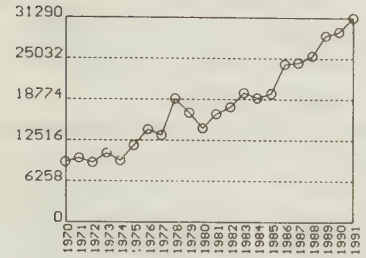
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Needlefishes
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 14.83 %
Rank..... 6 of 12 based on:1990
Percent to total..... 3.59 % , Cumulative: 75.86 %



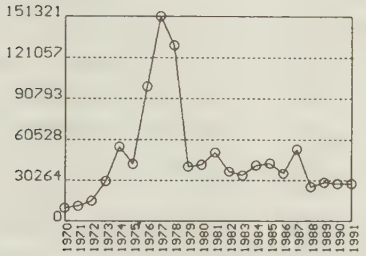
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flyingfishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 5.18 %
Rank..... 7 of 12 based on:1990
Percent to total..... 3.34 % , Cumulative: 79.21 %



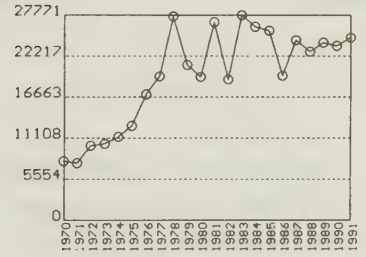
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Barracudas
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 20.07 %
Rank..... 8 of 12 based on:1990
Percent to total..... 3.20 % , Cumulative: 82.40 %



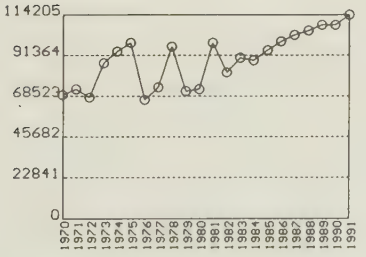
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indian scad
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... -4.17 %
Rank..... 9 of 12 based on:1990
Percent to total..... 3.08 % , Cumulative: 85.48 %



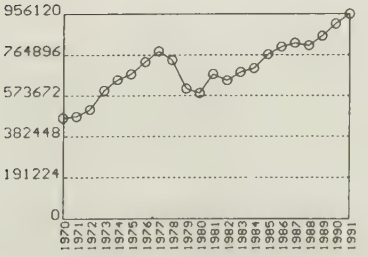
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Jacks, crevalles, nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 14.70 %
Rank..... 10 of 12 based on:1990
Percent to total..... 2.59 % , Cumulative: 88.07 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER JACKS, MULLETS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 6.87 %
Rank..... 11 of 12 based on:1990
Percent to total..... 11.93 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL JACKS, MULLETS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 8.72 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.6 Production of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35).

Table 4.6.1

PACIFIC, WESTERN CENTRAL
Herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Sardinellas nei	1	266458	30.4 %	Rising
Stolephorus anchovies	2	212846	24.3 %	Rising
Goldstripe sardinella	3	121596	13.9 %	Rising
Bali sardinella	4	103806	11.9 %	Rising
Anchovies nei	5	91970	10.5 %	Rising
Rainbow sardine	6	36028	4.1 %	Stable (-)
Wolf-herrings	7	26014	3.0 %	Stable (-)
Clupeoids nei	8	13312	1.5 %	Declining
Dorab wolf-herring	9	3970	0.5 %	Rising
Indo-Pacific tarpon	10	298	0.0 %	Declining
Bluestripe herring	11	21	0.0 %	Rising
Silver-stripe round herring	12	8	0.0 %	Rising
Japanese pilchard	13	2	0.0 %	Sharp rise
TOTAL HERRINGS, SARDINES, ETC.		876329	100.0 %	Rising

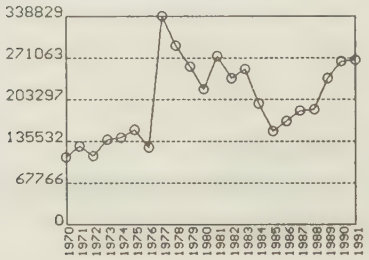
Proportion coming from declining catches.....	1.6 %
from stable catches.....	7.1 %
from rising catches.....	91.4 %

Major fishing countries ranked by 1990 production: Indonesia:39.98%, Philippines:34.30%, Thailand:23.42%, Malaysia:1.87%, Kiribati:0.38%, Singapore:0.05%, USSR:0.01%, Fiji:0.01%.

Table 4.6.2

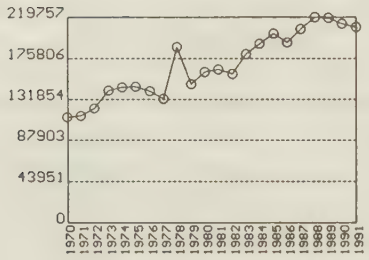
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Sardinellas nei	1	220353	1 36.3%	110700	2 31.1%
Stolephorus anchovies	2	161270	2 26.6%	112400	1 31.6%
Goldstripe sardinella	3	87591	3 14.4%	25200	5 7.1%
Bali sardinella	4	47283	4 7.8%	17400	6 4.9%
Anchovies nei	5	20311	6 3.4%	14300	8 4.0%
Rainbow sardine	6	40244	5 6.6%	33600	3 9.5%
Wolf-herrings	7	16139	7 2.7%	26100	4 7.3%
Clupeoids nei	8	11059	8 1.8%	15900	7 4.5%
Dorab wolf-herring	9	2415	9 0.4%	0	13 0.0%
Indo-Pacific tarpon	10	107	10 0.0%	100	9 0.0%
Bluestripe herring	11	7	11 0.0%	0	10 0.0%
Silver-stripe round herring	12	4	12 0.0%	0	11 0.0%
Japanese pilchard	13	0	13 0.0%	0	12 0.0%
TOTALS		606783	100.0%	355700	100.0%



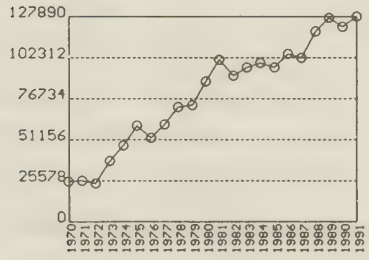
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sardinellas nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 8.40 %
Rank..... 1 of 11 based on:1990
Percent to total..... 30.42 % , Cumulative: 30.42 %



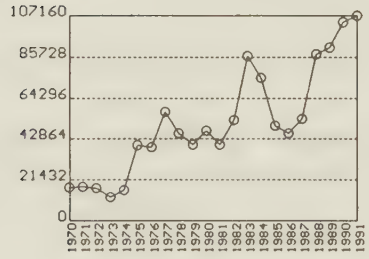
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Stolephorus anchovies
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 10.58 %
Rank..... 2 of 11 based on:1990
Percent to total..... 24.30 % , Cumulative: 54.71 %



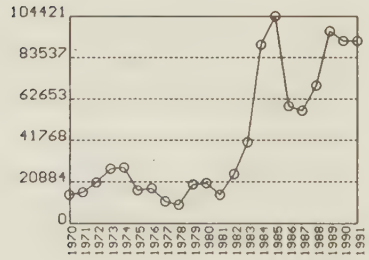
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Goldstripe sardinella
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 22.35 %
Rank..... 3 of 11 based on:1990
Percent to total..... 13.88 % , Cumulative: 68.59 %



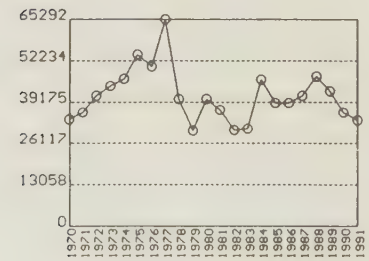
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bali sardinella
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 26.31 %
Rank..... 4 of 11 based on:1990
Percent to total..... 11.85 % , Cumulative: 80.44 %



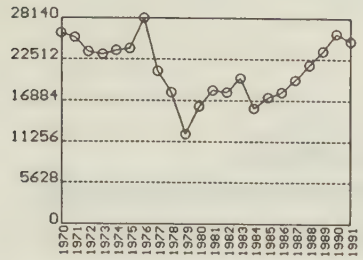
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Anchovies nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 33.95 %
Rank..... 5 of 11 based on:1990
Percent to total..... 10.50 % , Cumulative: 90.94 %



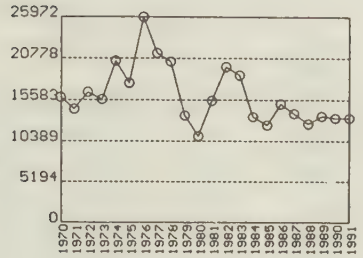
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Rainbow sardine
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... -2.18 %
Rank..... 6 of 11 based on:1990
Percent to total..... 4.11 % , Cumulative: 95.05 %



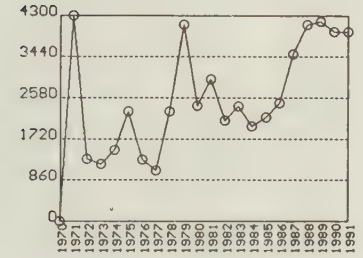
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Wolf-herrings
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... -2.40 %
Rank..... 7 of 11 based on:1990
Percent to total..... 2.97 % , Cumulative: 98.02 %



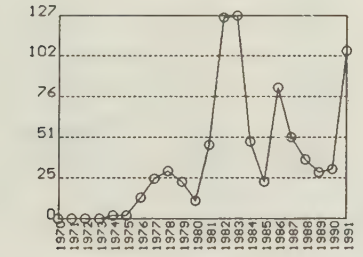
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Clupeoids nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... -5.53 %
Rank..... 8 of 11 based on:1990
Percent to total..... 1.52 % , Cumulative: 99.54 %



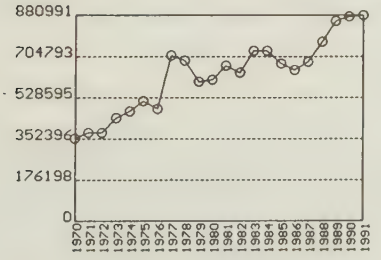
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Dorab wolf-herring
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 16.20 %
Rank..... 9 of 11 based on:1990
Percent to total..... 0.45 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER HERRINGS, SARDINES, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 34.52 %
Rank.....
.....



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL HERRINGS, SARDINES, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 12.61 %
Rank..... 11 of 11 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.7 Production of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36).

Table 4.7.1

PACIFIC, WESTERN CENTRAL
Tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36),
ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Skipjack tuna	1	710826	43.8 %	Rising
Yellowfin tuna	2	325887	20.1 %	Rising
Tuna-like fishes nei	3	151475	9.3 %	Rising
Frigate and bullet tunas	4	130882	8.1 %	Rising
Longtail tuna	5	79965	4.9 %	Sharp rise
Kawakawa	6	60916	3.8 %	Rising
Narrow-barred Spanish mackerel	7	58521	3.6 %	Rising
Bigeye tuna	8	35291	2.2 %	Rising
Albacore	9	25529	1.6 %	Rising
Seerfishes nei	10	18037	1.1 %	Rising
Indo-Pacific king mackerel	11	7440	0.5 %	Rising
Indo-Pacific blue marlin	12	6443	0.4 %	Rising
Swordfish	13	4167	0.3 %	Rising
Marlins,sailfishes,spearfishes	14	2730	0.2 %	Rising
Japanese Spanish mackerel	15	1145	0.1 %	Sharp rise
Striped marlin	16	895	0.1 %	Stable (+)
Wahoo	17	716	0.0 %	Sharp rise
Indo-Pacific sailfish	18	557	0.0 %	Stable (-)
Black marlin	19	472	0.0 %	Sharp rise
Northern bluefin tuna	20	201	0.0 %	Rising
Southern bluefin tuna	21	65	0.0 %	Sharp rise
TOTAL TUNAS, BONITOS, ETC.		1622160	100.0 %	Rising

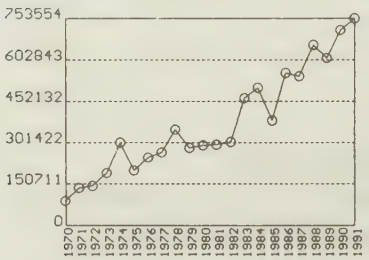
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.1 %
from rising catches.....	99.9 %

Major fishing countries ranked by 1990 production: Philippines:20.69%, Indonesia:20.39%, Japan:17.07%, Korea Rep:11.21%, Thailand:10.51%, USA:9.79%, Other nei A:5.38%, Solomon Is:2.50%, Malaysia:1.35%, Fiji:0.53%, USSR:0.21%, NewCaledonia:0.09%, Kiribati:0.07%, Tuvalu:0.06%, Vanuatu:0.04%, Micronesia:0.04%, Australia:0.02%, Guam:0.01%, Singapore:0.01%.

Table 4.7.2

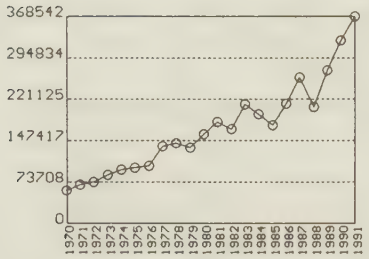
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Skipjack tuna	1	291740	1 37.7%	90450	1 29.3%
Yellowfin tuna	2	159577	2 20.6%	59000	2 19.1%
Tuna-like fishes nei	3	64436	4 8.3%	24065	5 7.8%
Frigate and bullet tunas	4	96875	3 12.5%	18400	6 6.0%
Longtail tuna	5	7980	10 1.0%	0	21 0.0%
Kawakawa	6	32135	6 4.2%	34200	4 11.1%
Narrow-barred Spanish mackerel	7	45346	5 5.9%	34600	3 11.2%
Bigeye tuna	8	27793	7 3.6%	13300	7 4.3%
Albacore	9	11358	9 1.5%	11500	8 3.7%
Seerfishes nei	10	19299	8 2.5%	10713	9 3.5%
Indo-Pacific king mackerel	11	3817	12 0.5%	2900	11 0.9%
Indo-Pacific blue marlin	12	6720	11 0.9%	4500	10 1.5%
Swordfish	13	3066	13 0.4%	2700	12 0.9%
Marlins,sailfishes,spearfishes	14	2172	14 0.3%	900	14 0.3%
Japanese Spanish mackerel	15	0	19 0.0%	0	18 0.0%
Striped marlin	16	1033	15 0.1%	1300	13 0.4%
Wahoo	17	0	21 0.0%	0	20 0.0%
Indo-Pacific sailfish	18	499	16 0.1%	300	15 0.1%
Black marlin	19	35	18 0.0%	0	17 0.0%
Northern bluefin tuna	20	280	17 0.0%	200	16 0.1%
Southern bluefin tuna	21	0	20 0.0%	0	19 0.0%
TOTALS		774161	100.0%	309028	100.0%



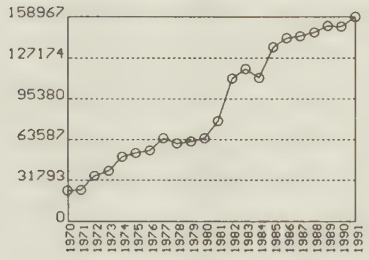
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skipjack tuna
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 26.43 %
Rank..... 1 of 12 based on:1990
Percent to total..... 43.82 % , Cumulative: 43.82 %



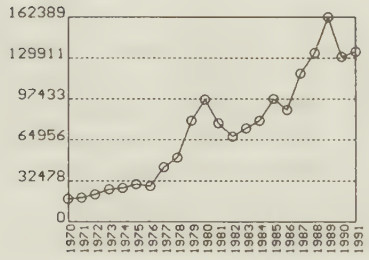
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowfin tuna
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 24.98 %
Rank..... 2 of 12 based on:1990
Percent to total..... 20.09 % , Cumulative: 63.91 %



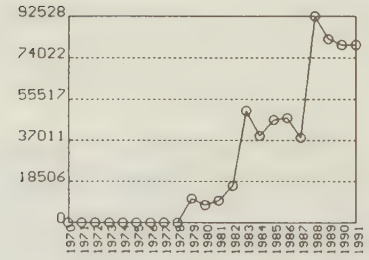
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tuna-like fishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 1 %
Trend..... 27.52 %
Rank..... 3 of 12 based on:1990
Percent to total..... 9.34 % , Cumulative: 73.25 %



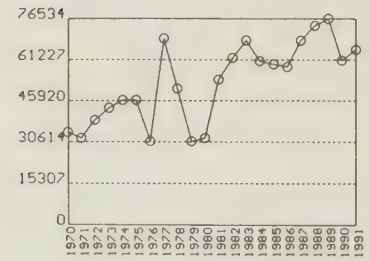
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Frigate and bullet tunas
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 30.66 %
Rank..... 4 of 12 based on:1990
Percent to total..... 8.07 % , Cumulative: 81.32 %



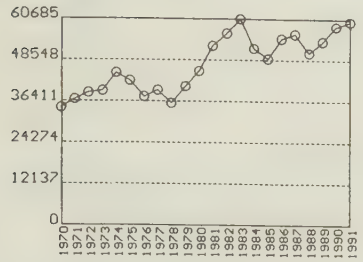
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Longtail tuna
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 57.57 %
Rank..... 5 of 12 based on:1990
Percent to total..... 4.93 % , Cumulative: 86.25 %



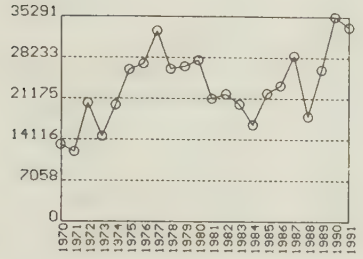
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Kawakawa
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 11.67 %
Rank..... 6 of 12 based on:1990
Percent to total..... 3.76 % , Cumulative: 90.00 %



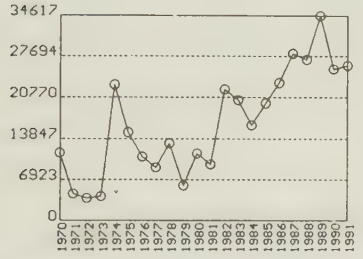
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Narrow-barred Spanish mackerel
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 8.42 %
Rank..... 7 of 12 based on:1990
Percent to total..... 3.61 % , Cumulative: 93.61 %



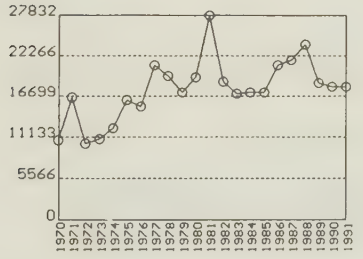
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeye tuna
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 7.48 %
Rank..... 8 of 12 based on:1990
Percent to total..... 2.18 % , Cumulative: 95.78 %



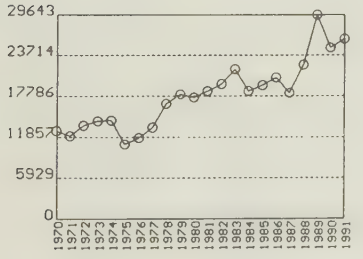
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Albacore
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 23.23 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.57 % , Cumulative: 97.36 %



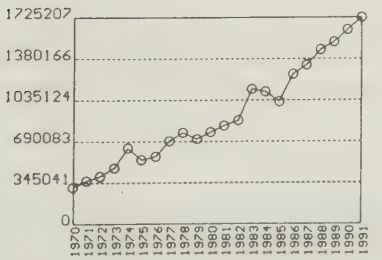
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Seerfishes nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 7.64 %
Rank..... 10 of 12 based on:1990
Percent to total..... 1.11 % , Cumulative: 98.47 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER TUNAS, BONITOS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 13.35 %
Rank..... 11 of 12 based on:1990
Percent to total..... 1.53 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL TUNAS, BONITOS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 24.59 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.8 Production of mackerels, snoeks, cutlassfishes, etc. (ISSCAAP GROUP 37).

Table 4.8.1

PACIFIC, WESTERN CENTRAL
Mackerels,snoeks,etc. (ISSCAAP GROUP 37), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Indian mackerels nei	1	211836	57.8 %	Rising
Indian mackerel	2	94489	25.8 %	Rising
Hairtails, cutlassfishes, nei	3	27747	7.6 %	Rising
Short mackerel	4	23031	6.3 %	Stable (-)
Largehead hairtail	5	4960	1.4 %	Declining
Mackerel-like fishes nei	6	4071	1.1 %	Rising
Chub mackerel	7	627	0.2 %	Stable (+)
TOTAL MACKERELS, SNOEKS, ETC.		366761	100.0 %	Rising

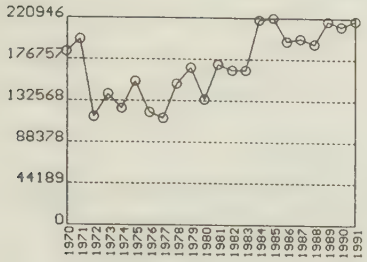
Proportion coming from declining catches.....	1.4 %
from stable catches.....	6.5 %
from rising catches.....	92.2 %

Major fishing countries ranked by 1990 production: Thailand:34.96%, Indonesia:31.18%, Philippines:28.45%, Malaysia:4.54%, Fiji:0.43%, Korea Rep:0.33%, Singapore:0.09%, NewCaledonia:0.02%.

Table 4.8.2

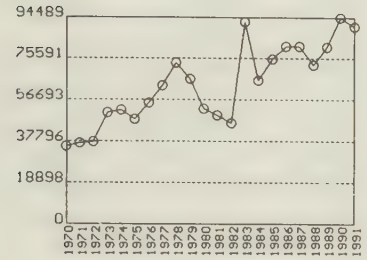
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of mackerels,snoeks,etc., (ISSCAAP GROUP 37), in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Indian mackerels nei	1	133972	1 55.8%	185000	1 70.0%
Indian mackerel	2	52682	2 22.0%	35500	2 13.4%
Hairtails, cutlassfishes, nei	3	16470	4 6.9%	13500	4 5.1%
Short mackerel	4	22208	3 9.3%	23300	3 8.8%
Largehead hairtail	5	7263	5 3.0%	4500	5 1.7%
Mackerel-like fishes nei	6	6024	6 2.5%	1700	6 0.6%
Chub mackerel	7	1367	7 0.6%	700	7 0.3%
TOTALS		239986	100.0%	264200	100.0%



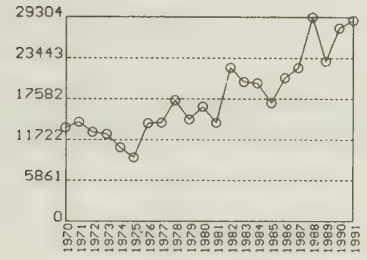
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indian mackerels nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 17 %
Trend..... 7.67 %
Rank..... 1 of 6 based on:1990
Percent to total..... 57.76 % , Cumulative: 57.76 %



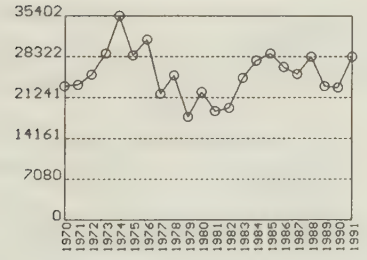
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indian mackerel
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 13.32 %
Rank..... 2 of 6 based on:1990
Percent to total..... 25.76 % , Cumulative: 83.52 %



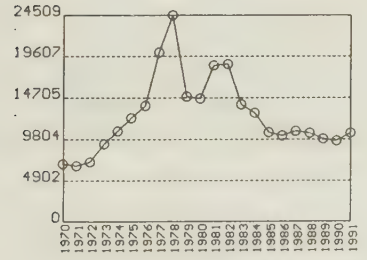
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Hairtails, cutlassfishes, nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 15.15 %
Rank..... 3 of 6 based on:1990
Percent to total..... 7.57 % , Cumulative: 91.09 %



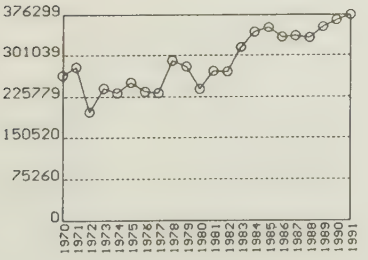
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Short mackerel
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... -0.63 %
Rank..... 4 of 6 based on:1990
Percent to total..... 6.28 % , Cumulative: 97.37 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MACKERELS, SNOEKS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 0.97 %
Rank..... 5 of 6 based on:1990
Percent to total..... 2.63 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MACKERELS, SNOEKS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 8.36 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.9 Production of sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38).

Table 4.9.1

PACIFIC, WESTERN CENTRAL
Sharks, rays, etc. (ISSCAAP GROUP 38), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Sharks, rays, skates, etc	1	50816	52.3 %	Rising
Skates and rays, nei	2	43558	44.8 %	Rising
Liveroil sharks	3	2850	2.9 %	Stable (-)
TOTAL SHARKS, RAYS, ETC.		97224	100.0 %	Rising

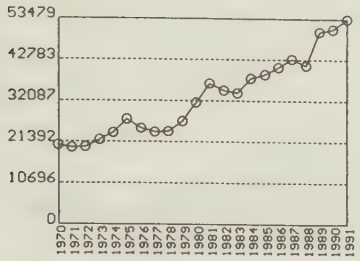
Proportion coming from declining catches.....	0.0 %
from stable catches.....	2.9 %
from rising catches.....	97.1 %

Major fishing countries ranked by 1990 production: Indonesia:59.77%, Philippines:18.97%, Thailand:8.93%, Malaysia:7.92%, Kiribati:1.87%, Korea Rep:0.98%, Singapore:0.84%, Japan:0.62%, Australia:0.10%.

Table 4.9.2

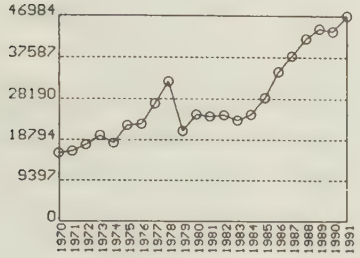
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of sharks,rays,etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Sharks, rays, skates, etc	1	31532	1 53.7%	20600	1 53.7%
Skates and rays, nei	2	24760	2 42.2%	15700	2 40.9%
Liveroil sharks	3	2440	3 4.2%	2100	3 5.5%
TOTALS		58732	100.0%	38400	100.0%



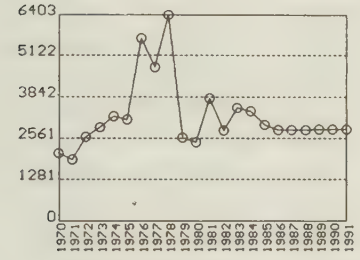
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sharks, rays, skates, etc
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 16.67 %
Rank..... 1 of 4 based on:1990
Percent to total..... 52.27 % , Cumulative: 52.27 %



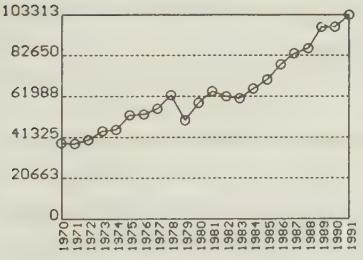
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skates and rays, nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 16.73 %
Rank..... 2 of 4 based on:1990
Percent to total..... 44.80 % , Cumulative: 97.07 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Liveroil sharks
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -1.10 %
Rank..... 3 of 4 based on:1990
Percent to total..... 2.93 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL SHARKS, RAYS, ETC.
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 15.79 %
Rank..... 4 of 4 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.10 Production of crustaceans (ISSCAAP GROUPS 41-47).

Table 4.10.1

PACIFIC, WESTERN CENTRAL
Crustaceans (ISSCAAP GROUPS 41-47), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Natantian decapods nei	1	136876	26.8 %	Rising
Penaeus shrimps nei	2	86899	17.0 %	Declining
Giant tiger prawn	3	83468	16.3 %	Rising
Banana prawn	4	51673	10.1 %	Rising
Sergestid shrimps	5	44500	8.7 %	Rising
Marine crabs nei	6	33746	6.6 %	Stable (+)
Sand crab	7	33593	6.6 %	Rising
Metapenaeus shrimps nei	8	22902	4.5 %	Rising
Mud crab	9	6573	1.3 %	Rising
Marine crustaceans nei	10	4910	1.0 %	Stable (+)
Tropical spiny lobsters nei	11	2012	0.4 %	Stable (+)
Western king prawn	12	1500	0.3 %	Rising
Slipper lobsters	13	1429	0.3 %	Stable (-)
Squillids nei	14	392	0.1 %	Rising
Green tiger prawn	15	300	0.1 %	Declining
Kuruma prawn	16	4	0.0 %	Stable (+)
TOTAL CRUSTACEANS		510777	100.0 %	Rising

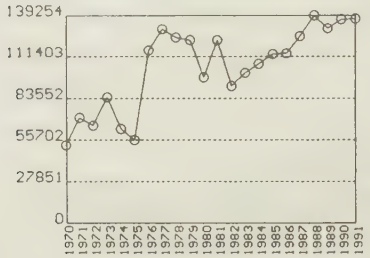
Proportion coming from declining catches.....	17.1 %
from stable catches.....	8.2 %
from rising catches.....	74.7 %

Major fishing countries ranked by 1990 production: Thailand:40.97%, Indonesia:25.16%, Viet Nam:13.53%, Philippines:9.58%, Malaysia:5.76%, Australia:2.35%, Cambodia:1.64%, Singapore:0.30%, Papua N Guin:0.23%, Fiji:0.16%, NewCaledonia:0.10%, Brunei Darus:0.10%, Vanuatu:0.06%, Kiribati:0.04%.

Table 4.10.2

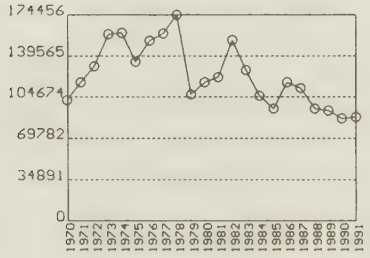
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of crustaceans (ISSCAAP GROUPS 41-47), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Natantian decapods nei	1	97537	2 24.7%	52300	2 18.8%
Penaeus shrimps nei	2	117191	1 29.7%	101900	1 36.6%
Giant tiger prawn	3	9968	8 2.5%	9300	8 3.3%
Banana prawn	4	48983	3 12.4%	29800	4 10.7%
Sergestid shrimps	5	24767	7 6.3%	13400	6 4.8%
Marine crabs nei	6	26431	5 6.7%	29900	3 10.7%
Sand crab	7	26691	4 6.8%	14700	5 5.3%
Metapenaeus shrimps nei	8	25104	6 6.4%	12600	7 4.5%
Mud crab	9	3254	10 0.8%	4400	10 1.6%
Marine crustaceans nei	10	8056	9 2.0%	4500	9 1.6%
Tropical spiny lobsters nei	11	1859	12 0.5%	1500	13 0.5%
Western king prawn	12	1926	11 0.5%	500	14 0.2%
Slipper lobsters	13	1251	14 0.3%	1800	11 0.7%
Squillids nei	14	293	15 0.1%	100	15 0.0%
Green tiger prawn	15	1586	13 0.4%	1600	12 0.6%
Kuruma prawn	16	0	16 0.0%	0	16 0.0%
TOTALS		394897	100.0%	278300	100.0%



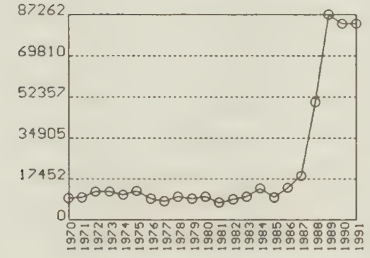
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Natantian decapods nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 11.41 %
Rank..... 1 of 12 based on:1990
Percent to total..... 26.80 % , Cumulative: 26.80 %



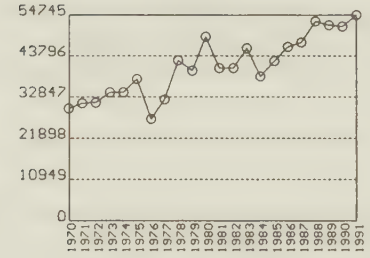
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Penaeus shrimps nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -6.79 %
Rank..... 2 of 12 based on:1990
Percent to total..... 17.01 % , Cumulative: 43.81 %



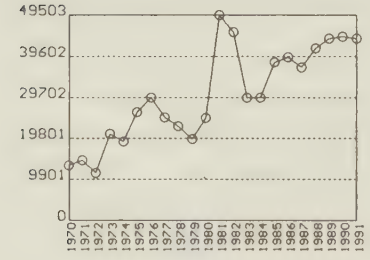
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Giant tiger prawn
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 43.47 %
Rank..... 3 of 12 based on:1990
Percent to total..... 16.34 % , Cumulative: 60.15 %



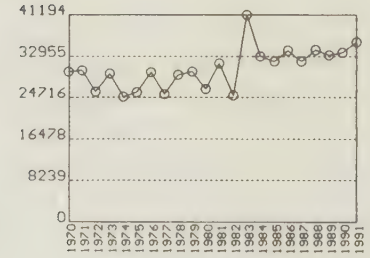
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Banana prawn
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 9.69 %
Rank..... 4 of 12 based on:1990
Percent to total..... 10.12 % , Cumulative: 70.27 %



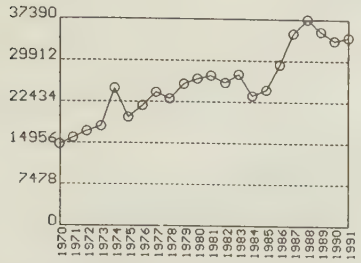
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sergestid shrimps
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 17.52 %
Rank..... 5 of 12 based on:1990
Percent to total..... 8.71 % , Cumulative: 78.98 %



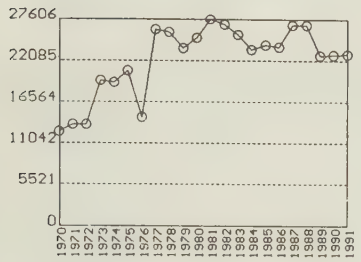
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine crabs nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... 4.47 %
Rank..... 6 of 12 based on:1990
Percent to total..... 6.61 % , Cumulative: 85.59 %



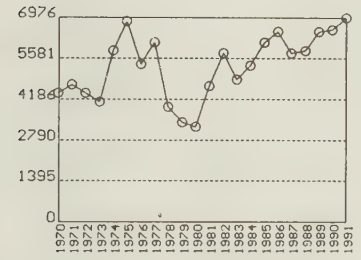
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sand crab
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 12.50 %
Rank..... 7 of 12 based on:1990
Percent to total..... 6.58 % , Cumulative: 92.16 %



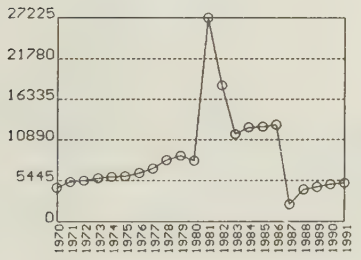
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Metapenaeus shrimps nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 7.81 %
Rank..... 8 of 12 based on:1990
Percent to total..... 4.48 % , Cumulative: 96.65 %



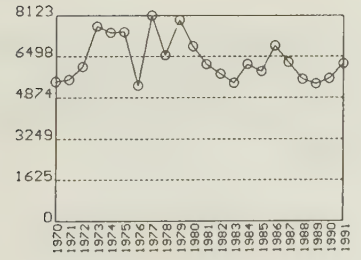
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mud crab
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 5.96 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.29 % , Cumulative: 97.94 %



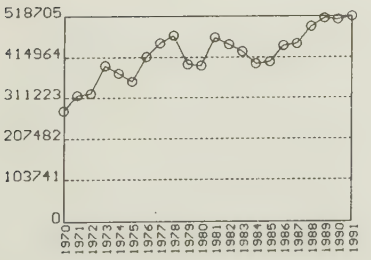
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine crustaceans nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 3.59 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.96 % , Cumulative: 98.90 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CRUSTACEANS
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 22 %
Trend..... -2.13 %
Rank..... 11 of 12 based on:1990
Percent to total..... 1.10 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CRUSTACEANS
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 7.02 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

4.11 Production of molluscs (ISSCAAP GROUPS 51-58).

Table 4.11.1

PACIFIC, WESTERN CENTRAL
Molluscs (ISSCAAP GROUPS 51-58), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Common squids	1	100157	21.9 %	Rising
Short neck clams	2	81898	17.9 %	Rising
Green mussel	3	72790	15.9 %	Declining
Cuttlefishes, bobtail squids	4	64807	14.2 %	Rising
Marine molluscs nei	5	31625	6.9 %	Stable (+)
Cupped oysters nei	6	20999	4.6 %	Rising
Sea mussels nei	7	19706	4.3 %	Rising
Octopuses	8	18906	4.1 %	Rising
Blood cockle	9	14320	3.1 %	Declining
Blood cockles	10	12407	2.7 %	Rising
Squids nei	11	7871	1.7 %	Rising
Horse mussels	12	5350	1.2 %	Declining
Scallops nei	13	2413	0.5 %	Declining
Clams nei	14	1745	0.4 %	Rising
Brown mussel	15	1728	0.4 %	Rising
Hard clams	16	372	0.1 %	Stable (-)
Pacific cupped oyster	17	91	0.0 %	Sharp rise
Abalones nei	18	89	0.0 %	Rising
Blacklip abalone	19	31	0.0 %	Rising
Gastropods nei	20	4	0.0 %	Rising
Japanese flying squid	21	0	0.0 %	Sharp decl
TOTAL MOLLUSCS		457309	100.0 %	Rising

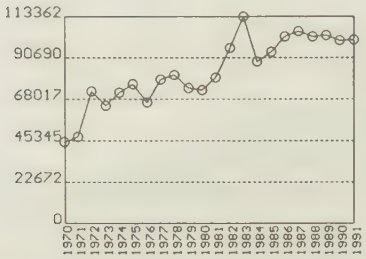
Proportion coming	from declining catches.....	20.8 %
	from stable catches.....	7.0 %
	from rising catches.....	72.3 %

Major fishing countries ranked by 1990 production: Thailand:64.25%, Philippines:15.97%, Viet Nam:7.11%, Indonesia:6.41%, Malaysia:2.79%, Kiribati:0.89%, Korea Rep:0.76%, Cambodia:0.58%, Australia:0.42%, Singapore:0.37%, Fiji:0.24%, Vanuatu:0.17%, NewCaledonia:0.03%, Solomon Is:0.01%.

Table 4.11.2

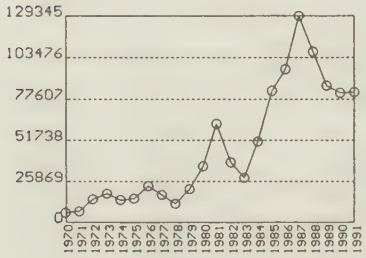
PACIFIC, WESTERN CENTRAL
Ranking order and proportions of molluscs (ISSCAAP GROUPS 51-58), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Common squids	1	72963	1 28.5%	44800	2 11.8%
Short neck clams	2	35438	3 13.9%	6200	7 1.6%
Green mussel	3	31386	4 12.3%	195000	1 51.2%
Cuttlefishes, bobtail squids	4	38226	2 15.0%	20200	6 5.3%
Marine molluscs nei	5	18518	5 7.2%	21800	5 5.7%
Cupped oysters nei	6	6361	10 2.5%	3900	9 1.0%
Sea mussels nei	7	3258	12 1.3%	800	12 0.2%
Octopuses	8	7397	9 2.9%	1800	10 0.5%
Blood cockle	9	10936	7 4.3%	43200	3 11.4%
Blood cockles	10	4862	11 1.9%	700	13 0.2%
Squids nei	11	3223	13 1.3%	0	21 0.0%
Horse mussels	12	8240	8 3.2%	35600	4 9.4%
Scallops nei	13	1489	14 0.6%	4300	8 1.1%
Clams nei	14	12820	6 5.0%	1600	11 0.4%
Brown mussel	15	46	17 0.0%	700	14 0.2%
Hard clams	16	489	15 0.2%	0	15 0.0%
Pacific cupped oyster	17	0	19 0.0%	0	18 0.0%
Abalones nei	18	107	16 0.0%	0	16 0.0%
Blacklip abalone	19	9	18 0.0%	0	17 0.0%
Gastropods nei	20	0	20 0.0%	0	19 0.0%
Japanese flying squid	21	0	21 0.0%	0	20 0.0%
TOTALS		255768	100.0%	380600	100.0%



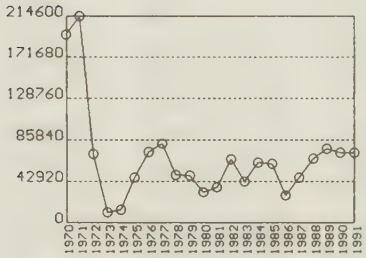
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Common squids
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 10.75 %
Rank..... 1 of 12 based on:1990
Percent to total..... 21.90 % , Cumulative: 21.90 %



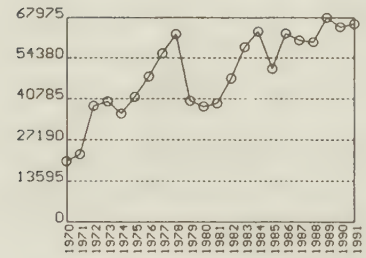
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Short neck clams
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 37.55 %
Rank..... 2 of 12 based on:1990
Percent to total..... 17.91 % , Cumulative: 39.81 %



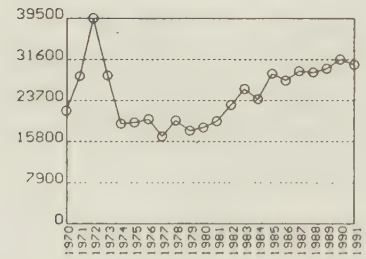
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Green mussel
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend.....-12.81 %
Rank..... 3 of 12 based on:1990
Percent to total..... 15.92 % , Cumulative: 55.73 %



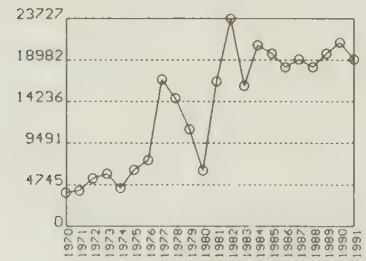
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Cuttlefishes, bobtail squids
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 12.79 %
Rank..... 4 of 12 based on:1990
Percent to total..... 14.17 % , Cumulative: 69.90 %



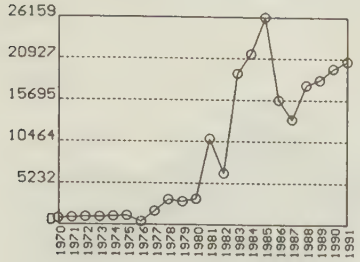
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine molluscs nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 3.88 %
Rank..... 5 of 12 based on:1990
Percent to total..... 6.92 % , Cumulative: 76.81 %



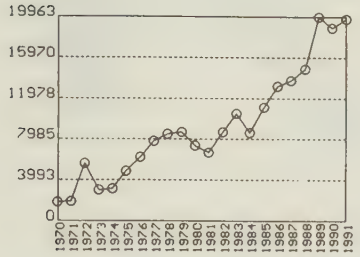
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Cupped oysters nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 22.94 %
Rank..... 6 of 12 based on:1990
Percent to total..... 4.59 % , Cumulative: 81.41 %



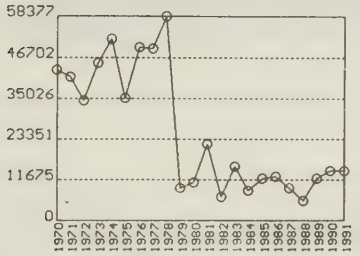
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sea mussels nei
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 44.19 %
Rank..... 7 of 12 based on:1990
Percent to total..... 4.31 % , Cumulative: 85.71 %



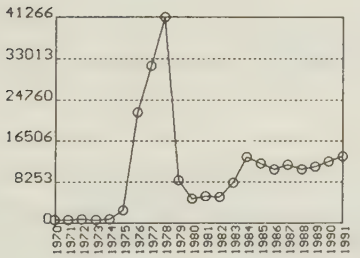
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Octopuses
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 29.91 %
Rank..... 8 of 12 based on:1990
Percent to total..... 4.13 % , Cumulative: 89.85 %



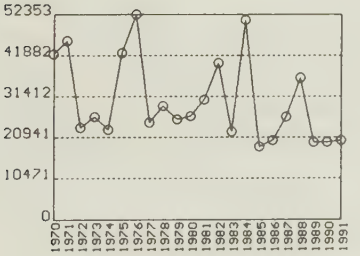
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Blood cockle
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 14 %
Trend.....-28.86 %
Rank..... 9 of 12 based on:1990
Percent to total..... 3.13 % , Cumulative: 92.98 %



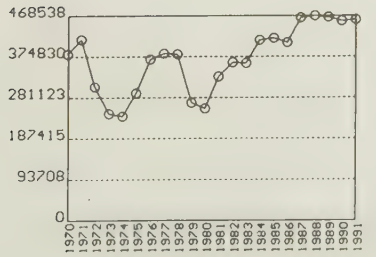
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Blood cockles
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 12.41 %
Rank..... 10 of 12 based on:1990
Percent to total..... 2.71 % , Cumulative: 95.69 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MOLLUSCS
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

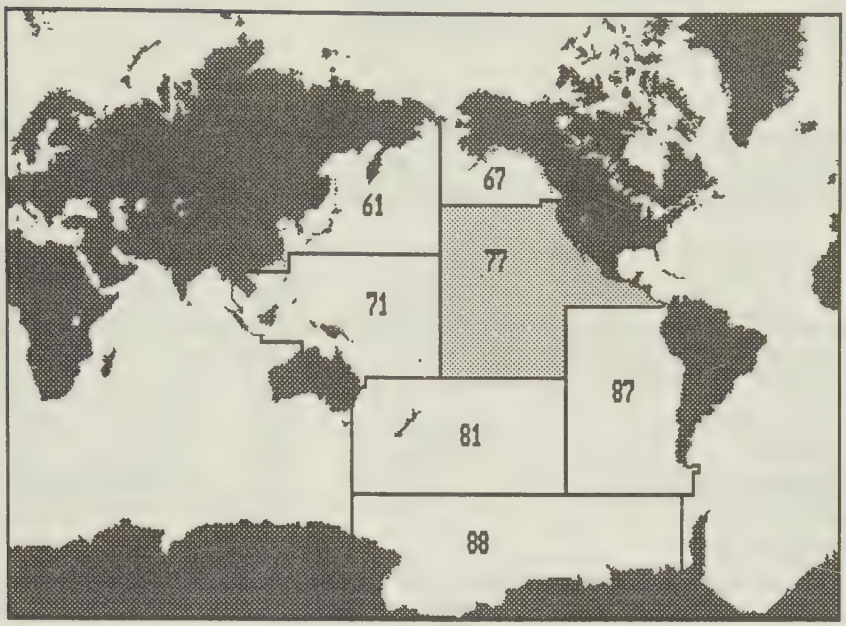
Fluctuation..... 27 %
Trend..... -7.70 %
Rank..... 11 of 12 based on:1990
Percent to total..... 4.31 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MOLLUSCS
Area.....PACIFIC, WESTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 7.28 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5. PACIFIC, EASTERN CENTRAL (Area 77)



Major producers of fish, crustaceans and molluscs (1990 ranking): Mexico:54.35%, USA:12.62%, Japan:11.84%, Panama:8.40%, Korea Rep:3.85%, Venezuela:3.21%, Other nei B:1.52%, Costa Rica:0.96%, USSR:0.90%, Other nei A:0.73%, Ecuador:0.59%, El Salvador:0.33%, Honduras:0.26%, Guatemala:0.22%, Fr Polynesia:0.08%, Cook Islands:0.05%, Nicaragua:0.05%, Samoa:0.03%, Tonga:0.02%.

Major species and percentages based on 1990 ranking: California pilchard:29.89%, Yellowfin tuna:19.48%, Bigeye tuna:6.81%, Chub mackerel:5.85%, Squids nei:5.50%, Pacific anchoveta:4.51%, Penaeus shrimps nei:3.66%, Skipjack tuna:3.25%, Deepbody thread herring:2.55%, Venus clams:2.17%, Sharks, rays,skates, etc:1.40%, Albacore:1.20%, Eastern Pacific bonito:1.05%, Scorpionfishes, nei:0.84%, Requiem sharks:0.71%, Swordfish:0.66%, Flatfishes nei:0.66%, Pacific herring:0.55%, Pacific sierra:0.54%, Californian anchovy:0.45%, Jumbo flying squid:0.42%, Marlins,sailfishes,spearfishes:0.41%, Natantian decapods nei:0.40%, Indo-Pacific blue marlin:0.39%, Marine crabs nei:0.38%, Pacific seabobs:0.36%, Mullets nei:0.35%, Ponyfishes(=Slipmouths)nei:0.35%, OTHER SPECIES:5.15%.

5.1 Production of diadromous fish (ISSCAAP GROUPS 21-25).

Table 5.1.1

PACIFIC, EASTERN CENTRAL
Diadromous fish (ISSCAAP GROUPS 21-25), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Chinook(=Spring=King)salmon	1	1788	64.7 %	Rising
Milkfish	2	832	30.1 %	Rising
Coho(=Silver)salmon	3	133	4.8 %	Declining
American shad	4	10	0.4 %	Sharp rise
Pink(=Humpback)salmon	5	0	0.0 %	Rising
Smelts nei	6	0	0.0 %	Sharp decl
TOTAL DIADROMOUS		2763	100.0 %	Rising

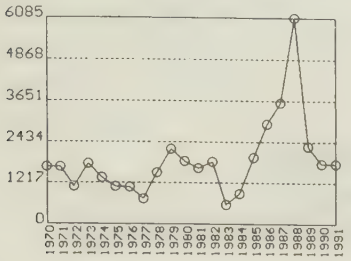
Proportion coming from declining catches.....	4.8 %
from stable catches.....	0.0 %
from rising catches.....	95.2 %

Major fishing countries ranked by 1990 production: USA:69.89%, Mexico:30.11%.

Table 5.1.2

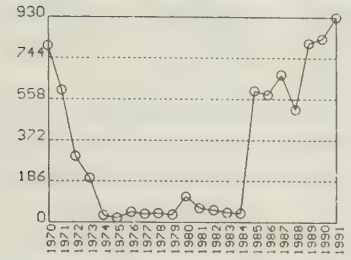
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of diadromous species in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Chinook(=Spring=King)salmon	1	1860	1 91.9%	1700	1 54.8%
Milkfish	2	117	2 5.8%	800	2 25.8%
Coho(=Silver)salmon	3	46	3 2.3%	400	3 12.9%
American shad	4	0	4 0.0%	0	5 0.0%
Pink(=Humpback)salmon	5	0	5 0.0%	0	6 0.0%
Smelts nei	6	0	6 0.0%	200	4 6.5%
TOTALS		2023	100.0%	3100	100.0%



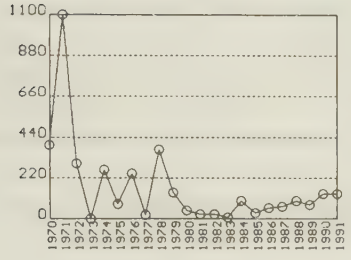
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chinook(=Spring=King)salmon
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 14.67 %
Rank..... 1 of 6 based on:1990
Percent to total..... 64.71 % , Cumulative: 64.71 %



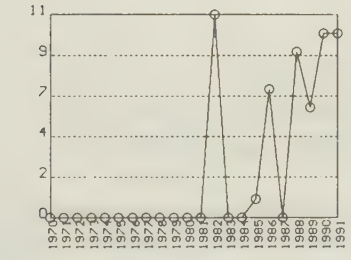
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Milkfish
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 23.51 %
Rank..... 2 of 6 based on:1990
Percent to total..... 30.11 % , Cumulative: 94.82 %



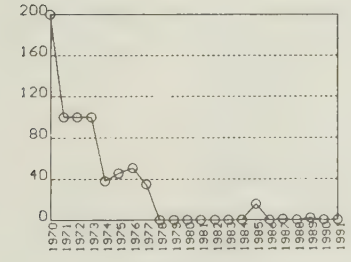
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Coho(=Silver)salmon
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend.....-38.11 %
Rank..... 3 of 6 based on:1990
Percent to total..... 4.81 % , Cumulative: 99.64 %



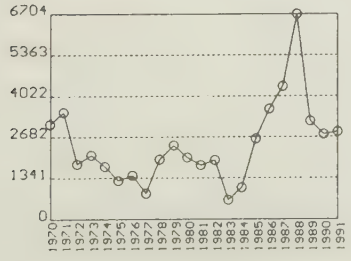
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....American shad
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 60.87 %
Rank..... 4 of 6 based on:1990
Percent to total..... 0.36 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER DIADROMOUS
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend.....-68.23 %
Rank.....
.....



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL DIADROMOUS
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 11.20 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.2 Production of flounders, halibuts, soles, etc. (ISSCAAP GROUP 31)

Table 5.2.1

PACIFIC, EASTERN CENTRAL
Flounders, halibuts, soles, etc.,
(ISSCAAP GROUP 31) ranked by 1990 production.

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Flatfishes nei	1	8818	99.9 %	Rising
Rock sole	2	6	0.1 %	Sharp rise
Lefteye flounders	3	0	0.0 %	Sharp rise
Pacific halibut	4	0	0.0 %	Rising
Arrowtooth flounder	5	0	0.0 %	Rising
TOTAL FLOUNDERS, SOLES, ETC.		8824	100.0 %	Rising

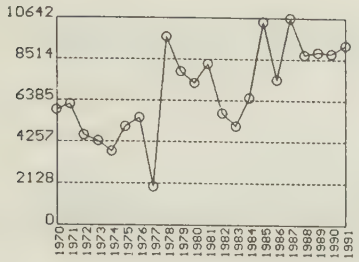
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: USA:68.02%, Mexico:31.89%, Japan:0.09%.

Table 5.2.2

PACIFIC, EASTERN CENTRAL
Ranking order and proportions of flounders, halibuts, soles, etc.,
(ISSCAAP GROUP 31), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Flatfishes nei	1	7289	1 100.0%	5900	1 99.9%
Rock sole	2	0	2 0.0%	0	2 0.1%
Lefteye flounders	3	0	3 0.0%	0	3 0.0%
Pacific halibut	4	0	4 0.0%	0	4 0.0%
Arrowtooth flounder	5	0	5 0.0%	0	5 0.0%
TOTALS		7289	100.0%	5900	100.0%



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flatfishes nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 12.12 %
Rank.....
.....

5.3 Production of cods, hakes, haddocks (ISSCAAP GROUP 32). Negligible.

5.4 Production of redfishes, basses, congers, etc. (ISSCAAP GROUP 33).

Table 5.4.1

PACIFIC, EASTERN CENTRAL
Redfishes, basses, congers, etc. (ISSCAAP GROUP 33), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Scorpionfishes, nei	1	11206	32.3 %	Rising
Ponyfishes(=Slipmouths)nei	2	4628	13.3 %	Rising
Yellow snapper	3	3620	10.4 %	Rising
Croakers, drums nei	4	3454	10.0 %	Rising
Snappers, jobfishes, nei	5	2831	8.2 %	Rising
Croakers nei	6	2690	7.8 %	Rising
Sablefish	7	1928	5.6 %	Stable (+)
Sea catfishes nei	8	1086	3.1 %	Rising
Groupers nei	9	886	2.6 %	Rising
Lingcod	10	756	2.2 %	Stable (-)
Snooks(=Robalos)nei	11	450	1.3 %	Rising
Snappers nei	12	281	0.8 %	Rising
Grunts, sweetlips, nei	13	279	0.8 %	Sharp decl
White croaker	14	278	0.8 %	Rising
Triggerfishes, durgons	15	181	0.5 %	Rising
Black seabass	16	63	0.2 %	Stable (+)
White weakfish	17	56	0.2 %	Declining
Weakfishes nei	18	25	0.1 %	Rising
Black drum	19	2	0.0 %	Stable (+)
Porgies, seabreams, nei	20	0	0.0 %	Rising
Yellowtail rockfish	21	0	0.0 %	Declining
Pacific ocean perch	22	0	0.0 %	Declining
Groupers, seabasses nei	23	0	0.0 %	Declining
Alfonsinos	24	0	0.0 %	Declining
Macdonald weakfish	25	0	0.0 %	Sharp decl
Demersal percomorphs nei	26	0	0.0 %	Sharp decl
TOTAL REDFISHES, BASSES, ETC.		34700	100.0 %	NO TREND

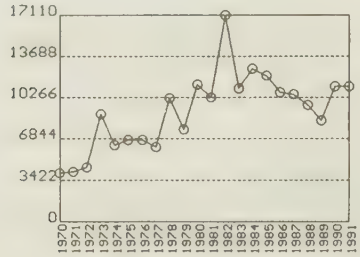
Proportion coming from declining catches.....	1.0 %
from stable catches.....	7.9 %
from rising catches.....	91.1 %

Major fishing countries ranked by 1990 production: Mexico:54.47%, USA:42.71%, USSR:1.81%, Cook Islands:0.54%, Korea Rep:0.47%.

Table 5.4.2

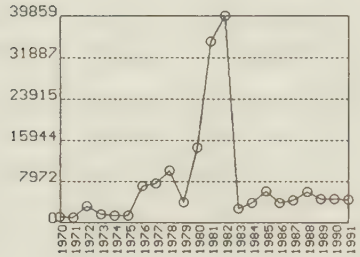
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Scorpionfishes, nei	1	11346	2 26.9%	4000	2 12.5%
Ponyfishes(=Slipmouths)nei	2	14614	1 34.6%	1200	6 3.8%
Yellow snapper	3	3603	3 8.5%	2000	3 6.3%
Croakers, drums nei	4	3248	4 7.7%	1000	8 3.1%
Snappers, jobfishes, nei	5	1470	7 3.5%	1200	7 3.8%
Croakers nei	6	2116	6 5.0%	100	20 0.3%
Sablefish	7	2425	5 5.7%	1300	5 4.1%
Sea catfishes nei	8	133	14 0.3%	200	16 0.6%
Groupers nei	9	935	9 2.2%	500	12 1.6%
Lingcod	10	939	8 2.2%	600	10 1.9%
Snooks(=Robalos)nei	11	447	10 1.1%	400	14 1.3%
Snappers nei	12	44	15 0.1%	40	21 0.1%
Grunts, sweetlips, nei	13	195	13 0.5%	14800	1 46.3%
White croaker	14	0	26 0.0%	300	15 0.9%
Triggerfishes, durgons	15	302	12 0.7%	0	25 0.0%
Black seabass	16	0	16 0.0%	100	19 0.3%
White weakfish	17	399	11 1.0%	500	11 1.6%
Weakfishes nei	18	0	17 0.0%	100	18 0.3%
Black drum	19	0	18 0.0%	0	26 0.0%
Porgies, seabreams, nei	20	0	19 0.0%	0	23 0.0%
Yellowtail rockfish	21	0	20 0.0%	0	24 0.0%
Pacific ocean perch	22	0	21 0.0%	0	22 0.0%
Groupers, seabasses nei	23	0	22 0.0%	200	17 0.6%
Alfonsinos	24	0	23 0.0%	1900	4 6.0%
Macdonald weakfish	25	0	24 0.0%	500	13 1.6%
Demersal percomorphs nei	26	0	25 0.0%	1000	9 3.1%
TOTALS		42216	100.0%	31940	100.0%



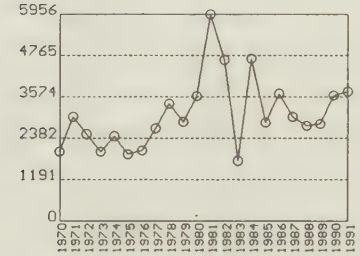
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Scorpionfishes, nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... 12.63 %
Rank..... 1 of 12 based on:1990
Percent to total..... 32.29 % , Cumulative: 32.29 %



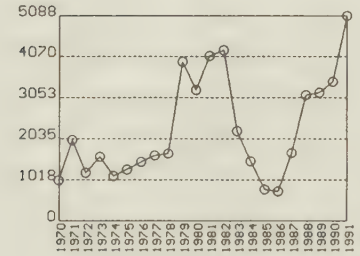
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Ponyfishes(=Slipmouths)nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 8.98 %
Rank..... 2 of 12 based on:1990
Percent to total..... 13.34 % , Cumulative: 45.63 %



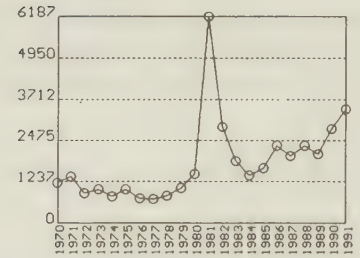
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellow snapper
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 7.15 %
Rank..... 3 of 12 based on:1990
Percent to total..... 10.43 % , Cumulative: 56.06 %



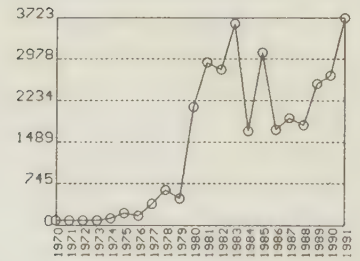
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Croakers, drums nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 14.64 %
Rank..... 4 of 12 based on:1990
Percent to total..... 9.95 % , Cumulative: 66.02 %



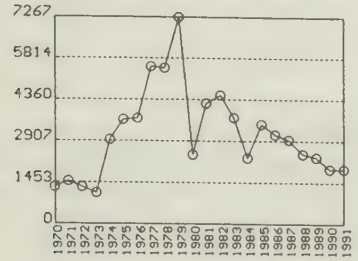
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Snappers, jobfishes, nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 18.72 %
Rank..... 5 of 12 based on:1990
Percent to total..... 8.16 % , Cumulative: 74.18 %



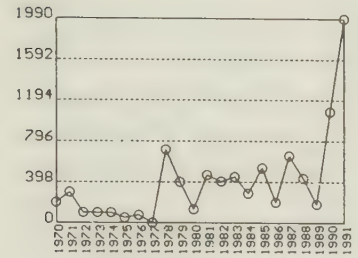
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Croakers nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 38.14 %
Rank..... 6 of 12 based on:1990
Percent to total..... 7.75 % , Cumulative: 81.93 %



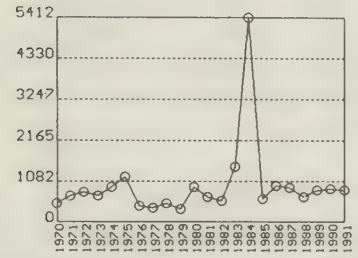
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sablefish
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 0.87 %
Rank..... 7 of 12 based on:1990
Percent to total..... 5.56 % , Cumulative: 87.48 %



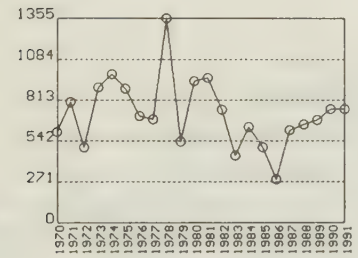
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sea catfishes nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 35.78 %
Rank..... 8 of 12 based on:1990
Percent to total..... 3.13 % , Cumulative: 90.61 %



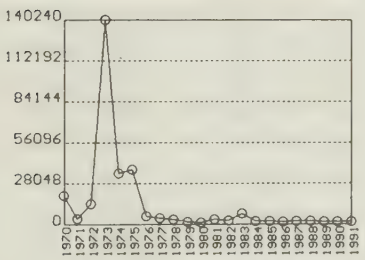
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Groupers nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 10.30 %
Rank..... 9 of 12 based on:1990
Percent to total..... 2.55 % , Cumulative: 93.17 %



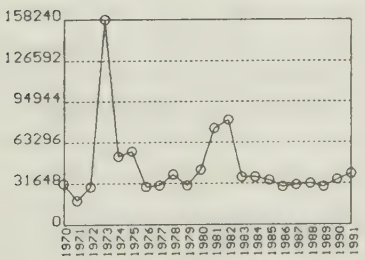
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Lingcod
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... -4.29 %
Rank..... 10 of 12 based on:1990
Percent to total..... 2.18 % , Cumulative: 95.35 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER REDFISHES, BASSES, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-51.87 %
Rank..... 11 of 12 based on:1990
Percent to total..... 4.65 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL REDFISHES, BASSES, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -7.84 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.5 Production of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34).

Table 5.5.1

PACIFIC, EASTERN CENTRAL
Jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Mullets nei	1	4675	38.5 %	Stable (-)
Pacific jack mackerel	2	4160	34.2 %	Declining
Jacks, crevalles, nei	3	2294	18.9 %	Rising
Pompanos	4	264	2.2 %	Rising
Bobo mullet	5	190	1.6 %	Rising
Barracudas	6	189	1.6 %	Rising
Common dolphinfish	7	184	1.5 %	Rising
Carangids nei	8	95	0.8 %	Declining
Amberjacks nei	9	57	0.5 %	Stable (+)
Flyingfishes nei	10	48	0.4 %	Stable (-)
TOTAL JACKS, MULLETS, ETC.		12156	100.0 %	Declining

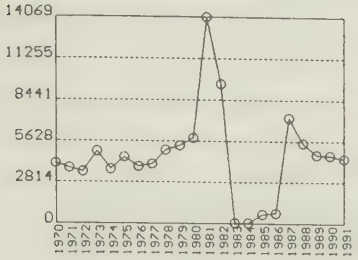
Proportion coming from declining catches.....	35.0 %
from stable catches.....	39.3 %
from rising catches.....	25.7 %

Major fishing countries ranked by 1990 production: Mexico:58.36%, USA:33.49%, El Salvador:3.98%, USSR:1.57%, Cook Islands:1.00%, Japan:0.89%, Fr Polynesia:0.72%.

Table 5.5.2

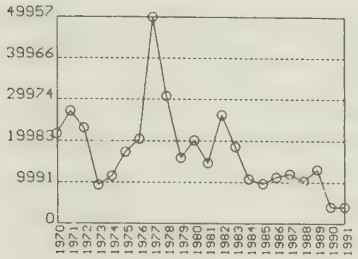
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Mullets nei	1	5857	2 20.3%	4110	2 15.0%
Pacific jack mackerel	2	20135	1 69.7%	21700	1 79.4%
Jacks, crevalles, nei	3	2419	3 8.4%	1060	3 3.9%
Pompanos	4	331	4 1.2%	100	4 0.4%
Bobo mullet	5	18	8 0.1%	0	11 0.0%
Barracudas	6	43	5 0.2%	0	9 0.0%
Common dolphinfish	7	26	7 0.1%	0	12 0.0%
Carangids nei	8	0	12 0.0%	100	5 0.4%
Amberjacks nei	9	12	9 0.0%	100	6 0.4%
Flyingfishes nei	10	34	6 0.1%	50	8 0.2%
TOTALS		28875	100.0%	27320	100.0%



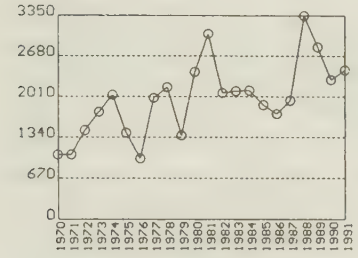
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mullets nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... -0.22 %
Rank..... 1 of 6 based on:1990
Percent to total..... 38.46 % , Cumulative: 38.46 %



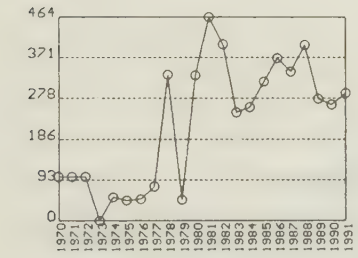
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific jack mackerel
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-16.26 %
Rank..... 2 of 6 based on:1990
Percent to total..... 34.22 % , Cumulative: 72.68 %



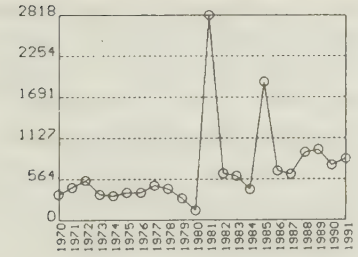
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Jacks, crevalles, nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 11.30 %
Rank..... 3 of 6 based on:1990
Percent to total..... 18.87 % , Cumulative: 91.55 %



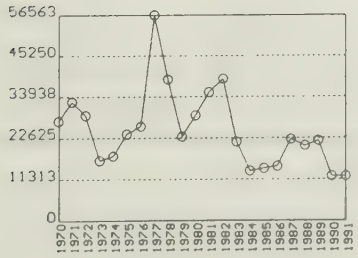
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pompanos
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 24.82 %
Rank..... 4 of 6 based on:1990
Percent to total..... 2.17 % , Cumulative: 93.72 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER JACKS, MULLETS, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... 16.28 %
Rank..... 5 of 6 based on:1990
Percent to total..... 6.26 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL JACKS, MULLETS, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -9.84 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.6 Production of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35).

Table 5.6.1

PACIFIC, EASTERN CENTRAL
Herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
California pilchard	1	398699	78.6 %	Rising
Pacific anchoveta	2	60088	11.8 %	Rising
Deepbody thread herring	3	33983	6.7 %	Rising
Pacific herring	4	7345	1.5 %	Rising
Californian anchovy	5	5993	1.2 %	Stable (-)
Clupeoids nei	6	1485	0.3 %	Rising
Ladyfish	7	0	0.0 %	Declining
TOTAL HERRINGS, SARDINES, ETC.		507593	100.0 %	Rising

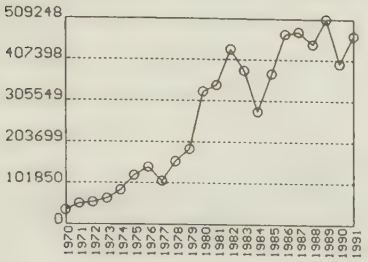
Proportion coming from declining catches.....	0.0 %
from stable catches.....	1.2 %
from rising catches.....	98.8 %

Major fishing countries ranked by 1990 production: Mexico:78.58%, Panama:18.28%, USA:2.62%, Costa Rica:0.28%, USSR:0.26%.

Table 5.6.2

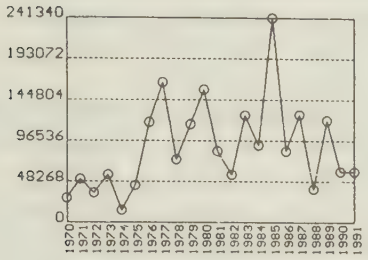
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
California pilchard	1	328096	2 36.7%	35500	2 21.7%
Pacific anchoveta	2	156782	3 17.5%	28600	3 17.5%
Deepbody thread herring	3	23329	4 2.6%	6900	4 4.2%
Pacific herring	4	7868	5 0.9%	100	5 0.1%
Californian anchovy	5	374069	1 41.8%	92400	1 56.5%
Clupeoids nei	6	4042	6 0.5%	100	6 0.1%
Ladyfish	7	0	7 0.0%	0	7 0.0%
TOTALS		894186	100.0%	163600	100.0%



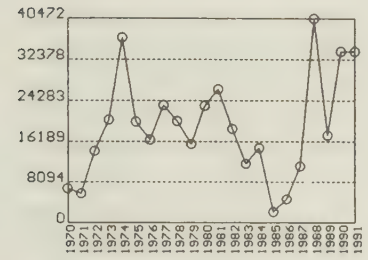
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....California pilchard
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 31.82 %
Rank..... 1 of 6 based on:1990
Percent to total..... 78.55 % , Cumulative: 78.55 %



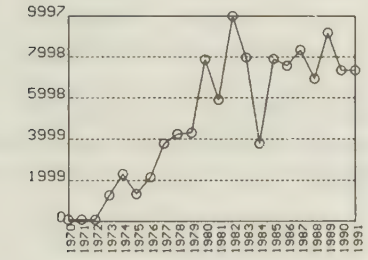
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific anchoveta
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 21 %
Trend..... 10.10 %
Rank..... 2 of 6 based on:1990
Percent to total..... 11.84 % , Cumulative: 90.38 %



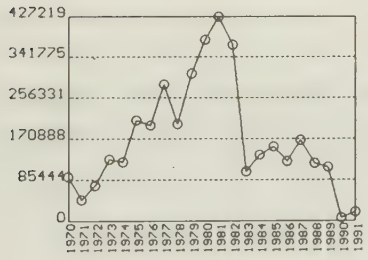
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Deepbody thread herring
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 7.67 %
Rank..... 3 of 6 based on:1990
Percent to total..... 6.69 % , Cumulative: 97.08 %



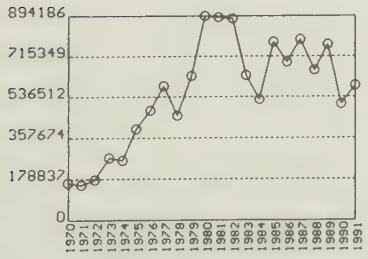
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific herring
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 30.09 %
Rank..... 4 of 6 based on:1990
Percent to total..... 1.45 % , Cumulative: 98.53 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER HERRINGS, SARDINES, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -4.27 %
Rank..... 5 of 6 based on:1990
Percent to total..... 1.47 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL HERRINGS, SARDINES, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 16.27 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.7 Production of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36).

Table 5.7.1

PACIFIC, EASTERN CENTRAL
Tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Yellowfin tuna	1	259770	56.7 %	Rising
Bigeye tuna	2	90804	19.8 %	Rising
Skipjack tuna	3	43367	9.5 %	Stable (-)
Albacore	4	16061	3.5 %	Rising
Eastern Pacific bonito	5	13985	3.1 %	Declining
Swordfish	6	8835	1.9 %	Rising
Pacific sierra	7	7147	1.6 %	Stable (+)
Marlins,sailfishes,spearfishes	8	5426	1.2 %	Rising
Indo-Pacific blue marlin	9	5218	1.1 %	Rising
Tuna-like fishes nei	10	3170	0.7 %	Rising
Striped marlin	11	2620	0.6 %	Declining
Northern bluefin tuna	12	1362	0.3 %	Declining
Indo-Pacific sailfish	13	300	0.1 %	Declining
Black skipjack	14	260	0.1 %	Stable (-)
Black marlin	15	82	0.0 %	Stable (-)
Tunas nei	16	20	0.0 %	Rising
Seerfishes nei	17	1	0.0 %	Rising
Frigate and bullet tunas	18	0	0.0 %	Rising
Kawakawa	19	0	0.0 %	Declining
TOT SPECIES		458428	100.0 %	Rising

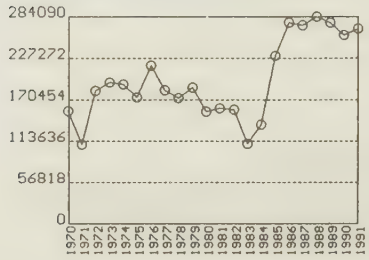
Proportion coming from declining catches.....	4.0 %
from stable catches.....	11.1 %
from rising catches.....	84.9 %

Major fishing countries ranked by 1990 production: Mexico:30.26%, Japan:26.63%, USA:14.85%, Venezuela:9.33%, Korea Rep:7.73%, Other nei B:4.41%, Panama:2.18%, Other nei A:2.13%, Ecuador:1.71%, Costa Rica:0.31%, Fr Polynesia:0.19%, El Salvador:0.13%, Samoa:0.08%, Tonga:0.05%, Amer Samoa:0.01%.

Table 5.7.2

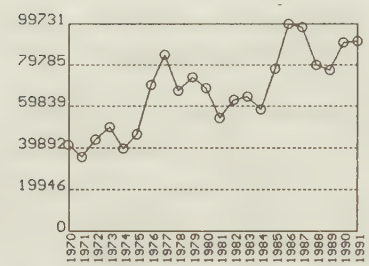
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Yellowfin tuna	1	154291	1 37.5%	155310	1 51.5%
Bigeye tuna	2	68616	3 16.7%	41380	3 13.7%
Skipjack tuna	3	130951	2 31.8%	46810	2 15.5%
Albacore	4	18991	4 4.6%	15200	4 5.0%
Eastern Pacific bonito	5	8331	5 2.0%	4300	10 1.4%
Swordfish	6	4308	9 1.1%	6000	8 2.0%
Pacific sierra	7	4028	10 1.0%	2800	11 0.9%
Marlins,sailfishes,spearfishes	8	833	14 0.2%	200	13 0.1%
Indo-Pacific blue marlin	9	5509	6 1.3%	6600	6 2.2%
Tuna-like fishes nei	10	4449	8 1.1%	510	12 0.2%
Striped marlin	11	5134	7 1.3%	11100	5 3.7%
Northern bluefin tuna	12	2846	11 0.7%	6200	7 2.1%
Indo-Pacific sailfish	13	1525	13 0.4%	4900	9 1.6%
Black skipjack	14	1736	12 0.4%	0	17 0.0%
Black marlin	15	0	18 0.0%	200	14 0.1%
Tunas nei	16	142	15 0.0%	0	15 0.0%
Seerfishes nei	17	0	19 0.0%	0	18 0.0%
Frigate and bullet tunas	18	1	17 0.0%	0	16 0.0%
Kawakawa	19	24	16 0.0%	0	19 0.0%
TOTALS		411715	100.0%	301510	100.0%



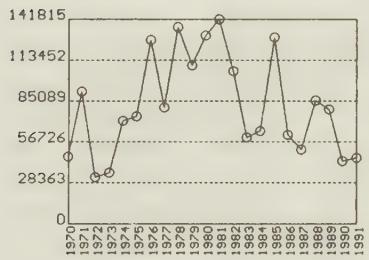
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowfin tuna
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 9.70 %
Rank..... 1 of 12 based on:1990
Percent to total..... 56.67 % , Cumulative: 56.67 %



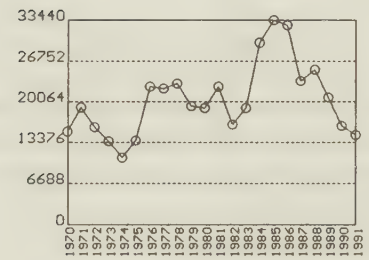
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeye tuna
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 12.61 %
Rank..... 2 of 12 based on:1990
Percent to total..... 19.81 % , Cumulative: 76.47 %



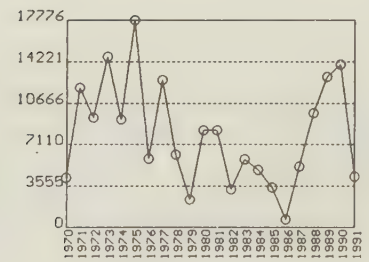
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skipjack tuna
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... -0.65 %
Rank..... 3 of 12 based on:1990
Percent to total..... 9.46 % , Cumulative: 85.93 %



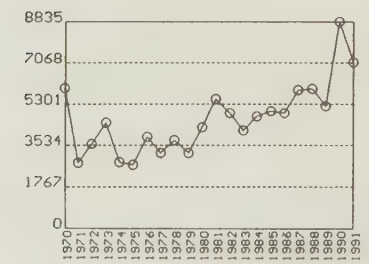
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Albacore
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 6.68 %
Rank..... 4 of 12 based on:1990
Percent to total..... 3.50 % , Cumulative: 89.44 %



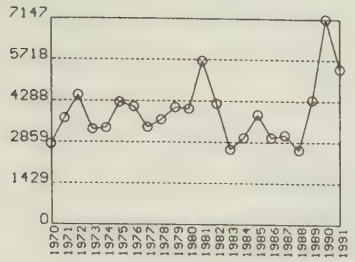
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Eastern Pacific bonito
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... -7.15 %
Rank..... 5 of 12 based on:1990
Percent to total..... 3.05 % , Cumulative: 92.49 %



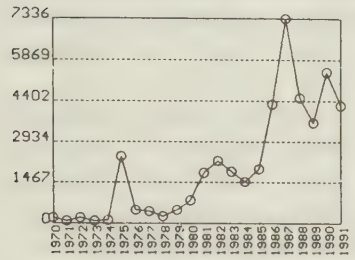
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Swordfish
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 11.86 %
Rank..... 6 of 12 based on:1990
Percent to total..... 1.93 % , Cumulative: 94.41 %



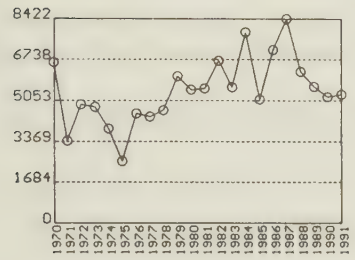
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific sierra
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 4.15 %
Rank..... 7 of 12 based on:1990
Percent to total..... 1.56 % , Cumulative: 95.97 %



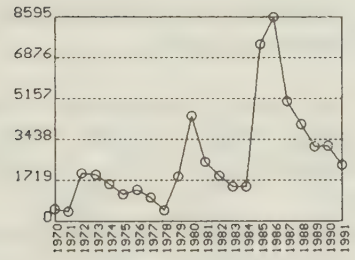
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marlins,sailfishes,spearfishes
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 44.99 %
Rank..... 8 of 12 based on:1990
Percent to total..... 1.18 % , Cumulative: 97.16 %



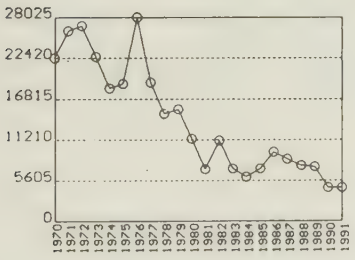
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indo-Pacific blue marlin
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 6.78 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.14 % , Cumulative: 98.30 %



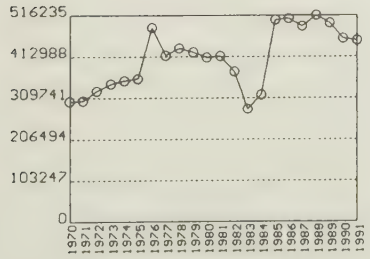
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tuna-like fishes nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 24.89 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.69 % , Cumulative: 98.99 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER TUNAS, BONITOS, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend.....-26.94 %
Rank..... 11 of 12 based on:1990
Percent to total..... 1.02 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL TUNAS, BONITOS, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 6.57 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.8 Production of mackerels, snoeks, cutlassfishes, etc. (ISSCAAP GROUP 37).

Table 5.8.1

PACIFIC, EASTERN CENTRAL
Mackerels, snoeks, cutlassfishes, etc.,
(ISSCAAP GROUP 37), ranked by 1990 catches.

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Chub mackerel	1	77986	100.0 %	Rising
Hairtails, cutlassfishes, nei	2	0	0.0 %	Rising
TOTAL MACKERELS, SNOEKS, ETC.		77986	100.0 %	Rising

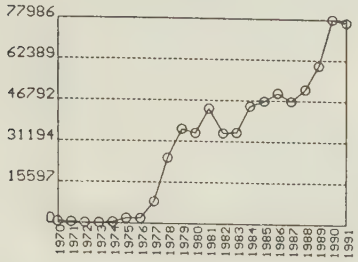
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: Mexico:51.32%, USA:48.68%.

Table 5.8.2

PACIFIC, EASTERN CENTRAL
Ranking order and proportions of mackerels, snoeks, cutlassfishes, etc.,
(ISSCAAP GROUP 37), in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Chub mackerel	1	34512	1 100.0%	700	1 100.0%
Hairtails, cutlassfishes, nei	2	0	2 0.0%	0	2 0.0%
TOTALS		34512	100.0%	700	100.0%



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chub mackerel
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 43.00 %
Rank.....
.....

5.9 Production of sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38).

Table 5.9.1

PACIFIC, EASTERN CENTRAL
Sharks, rays, chimaeras, etc.,
(ISSCAAP GROUP 38), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Sharks, rays, skates, etc	1	18714	62.8 %	Rising
Requiem sharks	2	9405	31.6 %	Rising
Skates and rays, nei	3	1688	5.7 %	Sharp rise
Dogfish sharks nei	4	3	0.0 %	Rising
TOTAL SHARKS, RAYS, ETC.		29810	100.0 %	Rising

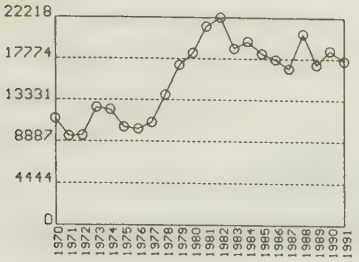
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: Mexico:79.97%, Japan:13.76%, USA:2.74%, Costa Rica:2.01%, Guatemala:0.99%, Korea Rep:0.39%, Cook Islands:0.13%.

Table 5.9.2

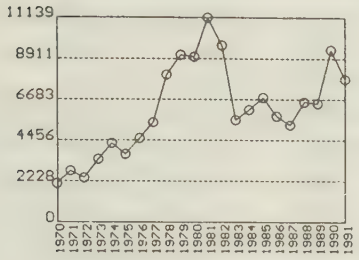
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of sharks, rays, chimaeras, etc.,
(ISSCAAP GROUP 38), in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Sharks, rays, skates, etc	1	18410	1 66.8%	11330	1 84.4%
Requiem sharks	2	9017	2 32.7%	2100	2 15.6%
Skates and rays, nei	3	127	3 0.5%	0	3 0.0%
Dogfish sharks nei	4	0	4 0.0%	0	4 0.0%
TOTALS		27554	100.0%	13430	100.0%



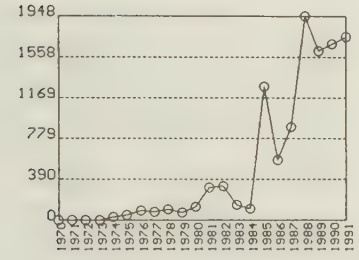
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sharks, rays, skates, etc
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 10.99 %
Rank..... 1 of 4 based on:1990
Percent to total..... 62.78 % , Cumulative: 62.78 %



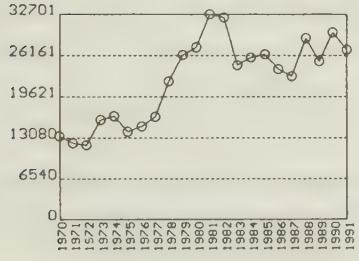
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Requiem sharks
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 13.29 %
Rank..... 2 of 4 based on:1990
Percent to total..... 31.55 % , Cumulative: 94.34 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skates and rays, nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 59.99 %
Rank..... 3 of 4 based on:1990
Percent to total..... 5.66 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL SHARKS, RAYS, ETC.
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 12.74 %
Rank..... 4 of 4 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.10 Production of crustaceans (ISSCAAP GROUPS 41-47).

Table 5.10.1

PACIFIC, EASTERN CENTRAL
Crustaceans (ISSCAAP GROUPS 41-47), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Penaeus shrimps nei	1	48875	65.5 %	Stable (+)
Natantian decapods nei	2	5348	7.2 %	Rising
Marine crabs nei	3	5042	6.8 %	Rising
Pacific seabobs	4	4837	6.5 %	Declining
Whiteleg shrimp	5	3471	4.7 %	Sharp rise
Tropical spiny lobsters nei	6	2900	3.9 %	Rising
Crystal shrimp	7	2445	3.3 %	Stable (-)
Dungeness crab	8	491	0.7 %	Declining
Pacific shrimps	9	474	0.6 %	Declining
Yellowleg shrimp	10	333	0.5 %	Declining
Marine crustaceans nei	11	200	0.3 %	Rising
Blue shrimp	12	180	0.2 %	Sharp rise
Pacific rock crab	13	0	0.0 %	Sharp decl
Craylets, squat lobsters	14	0	0.0 %	Rising
TOTAL CRUSTACEANS		74596	100.0 %	Rising

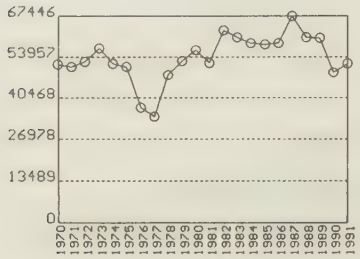
Proportion coming from declining catches.....	8.2 %
from stable catches.....	68.8 %
from rising catches.....	23.0 %

Major fishing countries ranked by 1990 production: Mexico:59.42%, Costa Rica:12.32%, Panama:12.12%, Honduras:4.45%, El Salvador:3.83%, Guatemala:3.50%, USA:3.29%, Nicaragua:0.95%, Fr Polynesia:0.11%, Samoa:0.01%, Cook Islands:0.01%.

Table 5.10.2

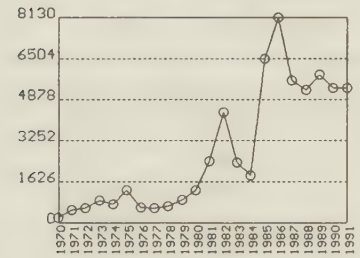
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of crustaceans (ISSCAAP GROUPS 41-47), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Penaeus shrimps nei	1	56396	1 69.1%	51700	1 69.4%
Natantian decapods nei	2	1292	6 1.6%	200	10 0.3%
Marine crabs nei	3	1095	7 1.3%	210	9 0.3%
Pacific seabobs	4	5079	4 6.2%	11100	2 14.9%
Whiteleg shrimp	5	0	14 0.0%	0	14 0.0%
Tropical spiny lobsters nei	6	2300	5 2.8%	1500	5 2.0%
Crystal shrimp	7	5122	3 6.3%	4300	3 5.8%
Dungeness crab	8	425	9 0.5%	3100	4 4.2%
Pacific shrimps	9	350	10 0.4%	1200	6 1.6%
Yellowleg shrimp	10	619	8 0.8%	900	7 1.2%
Marine crustaceans nei	11	42	11 0.1%	0	12 0.0%
Blue shrimp	12	0	12 0.0%	0	13 0.0%
Pacific rock crab	13	0	13 0.0%	300	8 0.4%
Craylets, squat lobsters	14	8879	2 10.9%	0	11 0.0%
TOTALS		81599	100.0%	74510	100.0%



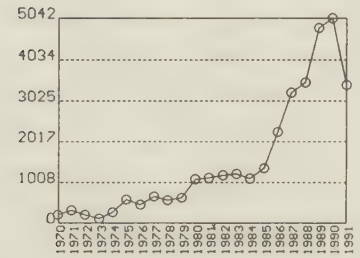
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Penaeus shrimps nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 3.22 %
Rank..... 1 of 12 based on:1990
Percent to total..... 65.52 % , Cumulative: 65.52 %



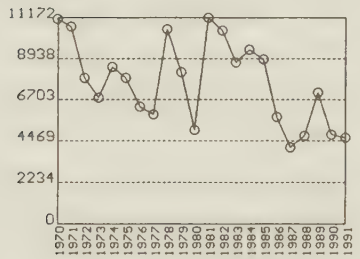
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Natantian decapods nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 40.74 %
Rank..... 2 of 12 based on:1990
Percent to total..... 7.17 % , Cumulative: 72.69 %



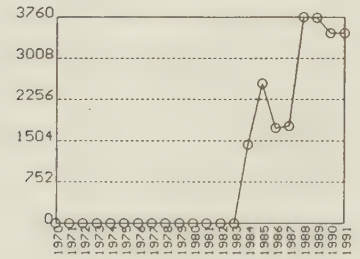
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine crabs nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 46.82 %
Rank..... 3 of 12 based on:1990
Percent to total..... 6.76 % , Cumulative: 79.45 %



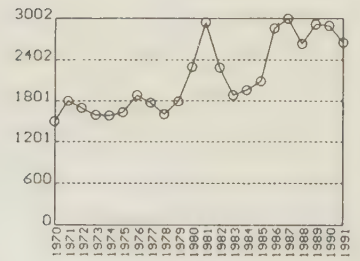
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific seabobs
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... -8.23 %
Rank..... 4 of 12 based on:1990
Percent to total..... 6.48 % , Cumulative: 85.93 %



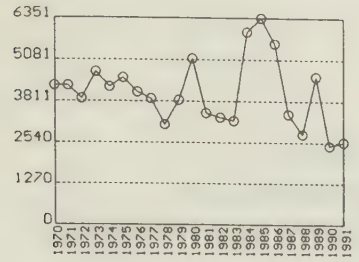
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Whiteleg shrimp
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 66.19 %
Rank..... 5 of 12 based on:1990
Percent to total..... 4.65 % , Cumulative: 90.59 %



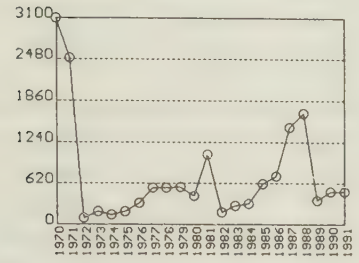
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tropical spiny lobsters nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 11.03 %
Rank..... 6 of 12 based on:1990
Percent to total..... 3.89 % , Cumulative: 94.47 %



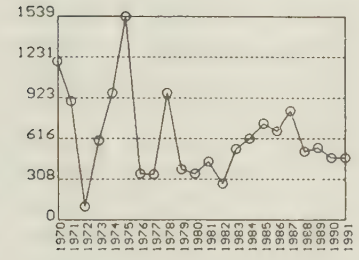
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Crystal shrimp
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -2.74 %
Rank..... 7 of 12 based on:1990
Percent to total..... 3.28 % , Cumulative: 97.75 %



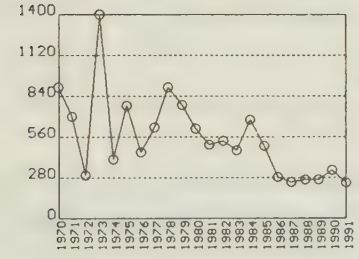
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Dungeness crab
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-11.82 %
Rank..... 8 of 12 based on:1990
Percent to total..... 0.66 % , Cumulative: 98.41 %



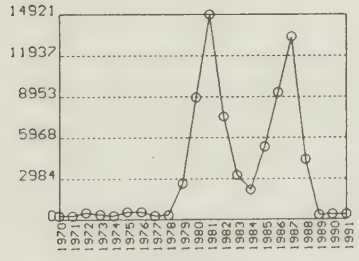
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific shrimps
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -7.96 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.64 % , Cumulative: 99.04 %



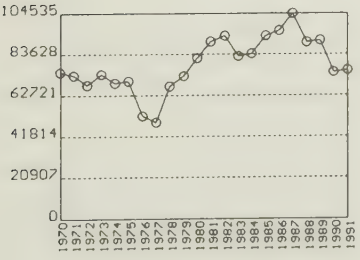
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowleg shrimp
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 17 %
Trend.....-17.09 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.45 % , Cumulative: 99.49 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CRUSTACEANS
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 23.72 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.51 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CRUSTACEANS
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 5.52 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

5.11 Production of molluscs (ISSCAAP GROUPS 51-58).

Table 5.11.1

PACIFIC, EASTERN CENTRAL
Molluscs (ISSCAAP GROUPS 51-58), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Squids nei	1	73419	57.9 %	Rising
Venus clams	2	28904	22.8 %	Rising
Jumbo flying squid	3	5630	4.4 %	Rising
Abalones nei	4	3920	3.1 %	Declining
Flat oysters nei	5	3577	2.8 %	Rising
Stromboid conchs	6	2699	2.1 %	Rising
Pacific cupped oyster	7	1946	1.5 %	Declining
Ark clams	8	1892	1.5 %	Rising
Sea mussels nei	9	1756	1.4 %	Rising
Marine molluscs nei	10	1640	1.3 %	Rising
Octopuses	11	1087	0.9 %	Rising
Clams nei	12	215	0.2 %	Declining
Peruvian calico scallop	13	50	0.0 %	Sharp rise
Common squids	14	20	0.0 %	Rising
TOTAL MOLLUSCS		126755	100.0 %	Rising

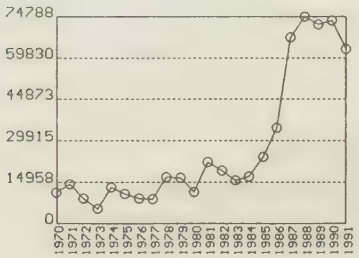
Proportion coming from declining catches.....	4.8 %
from stable catches.....	0.0 %
from rising catches.....	95.2 %

Major fishing countries ranked by 1990 production: Mexico:39.00%, Japan:24.90%, USA:14.94%, Korea Rep:12.34%, USSR:7.76%, El Salvador:0.33%, Cook Islands:0.27%, Panama:0.20%, Costa Rica:0.13%, Honduras:0.12%, Samoa:0.01%, Guatemala:0.01%, Fr Polynesia:0.01%.

Table 5.11.2

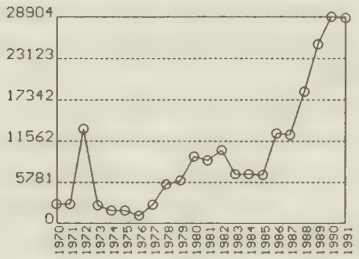
PACIFIC, EASTERN CENTRAL
Ranking order and proportions of molluscs (ISSCAAP GROUPS 51-58), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Squids nei	1	11464	2 19.1%	11200	1 38.2%
Venus clams	2	9443	3 15.8%	2700	4 9.2%
Jumbo flying squid	3	19068	1 31.8%	100	8 0.3%
Abalones nei	4	2794	6 4.7%	8000	2 27.3%
Flat oysters nei	5	2606	7 4.4%	1700	5 5.8%
Stromboid conchs	6	1503	8 2.5%	0	14 0.0%
Pacific cupped oyster	7	3803	5 6.4%	4300	3 14.7%
Ark clams	8	0	14 0.0%	0	13 0.0%
Sea mussels nei	9	513	9 0.9%	300	7 1.0%
Marine molluscs nei	10	8536	4 14.3%	1000	6 3.4%
Octopuses	11	127	10 0.2%	60	9 0.2%
Clams nei	12	25	11 0.0%	0	10 0.0%
Peruvian calico scallop	13	0	13 0.0%	0	12 0.0%
Common squids	14	2	12 0.0%	0	11 0.0%
TOTALS		59884	100.0%	29360	100.0%



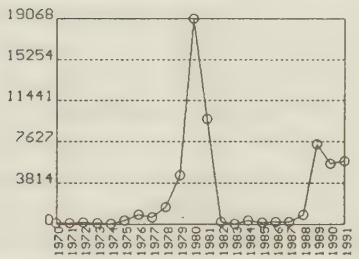
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Squids nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 39.11 %
Rank..... 1 of 12 based on:1990
Percent to total..... 57.92 % , Cumulative: 57.92 %



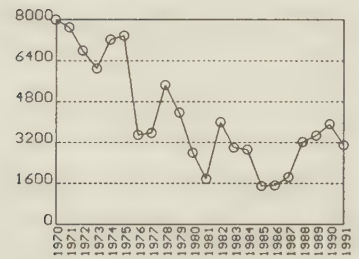
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Venus clams
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 37.13 %
Rank..... 2 of 12 based on:1990
Percent to total..... 22.80 % , Cumulative: 80.73 %



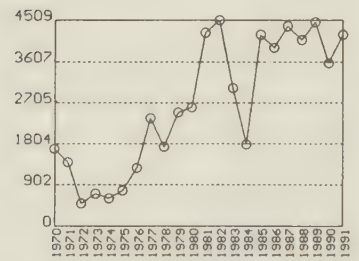
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Jumbo flying squid
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 23.89 %
Rank..... 3 of 12 based on:1990
Percent to total..... 4.44 % , Cumulative: 85.17 %



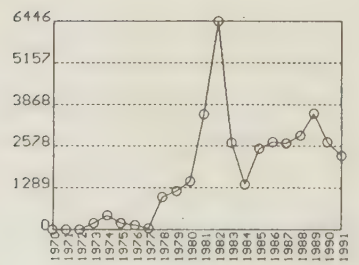
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Abalones nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-20.74 %
Rank..... 4 of 12 based on:1990
Percent to total..... 3.09 % , Cumulative: 88.26 %



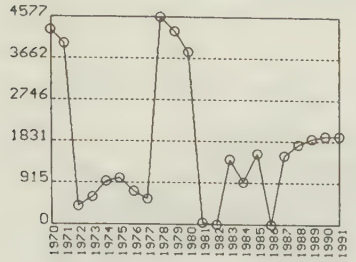
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flat oysters nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 24.66 %
Rank..... 5 of 12 based on:1990
Percent to total..... 2.82 % , Cumulative: 91.08 %



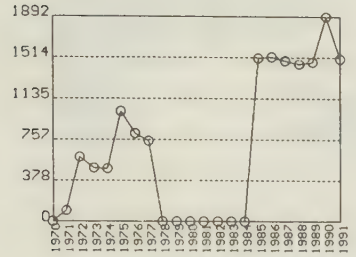
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Stromboid conchs
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 35.77 %
Rank..... 6 of 12 based on:1990
Percent to total..... 2.13 % , Cumulative: 93.21 %



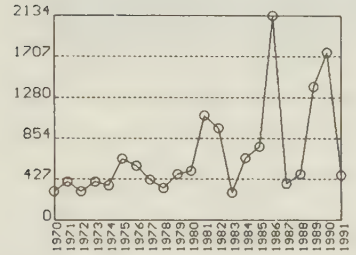
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific cupped oyster
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... -8.15 %
Rank..... 7 of 12 based on:1990
Percent to total..... 1.54 % , Cumulative: 94.75 %



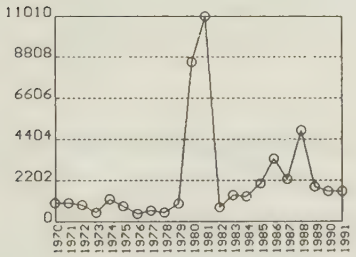
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Ark clams
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 32.85 %
Rank..... 8 of 12 based on:1990
Percent to total..... 1.49 % , Cumulative: 96.24 %



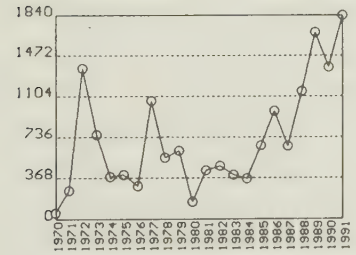
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sea mussels nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... 20.43 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.39 % , Cumulative: 97.62 %



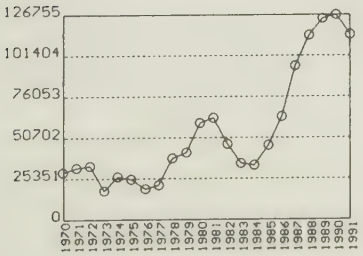
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine molluscs nei
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 15.61 %
Rank..... 10 of 12 based on:1990
Percent to total..... 1.29 % , Cumulative: 98.92 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MOLLUSCS
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

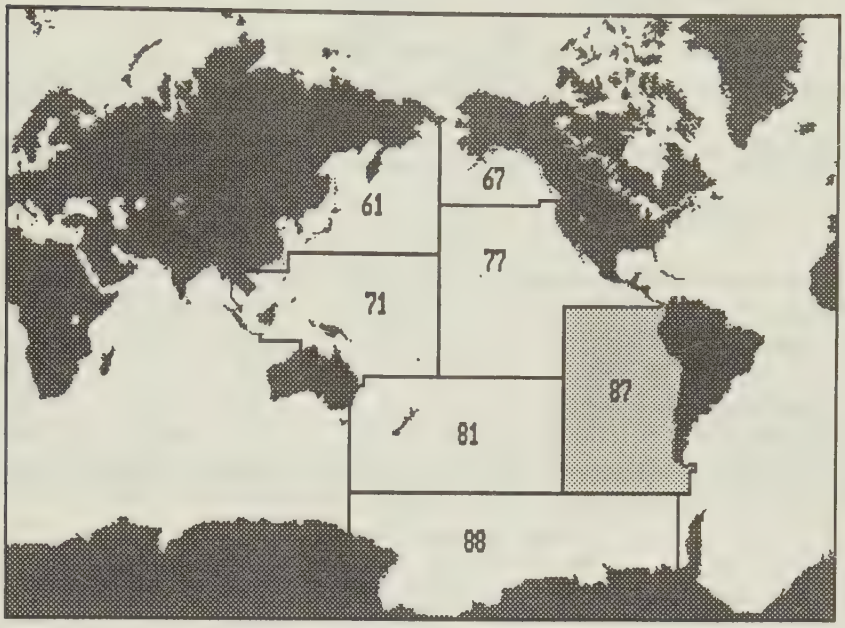
Fluctuation..... 14 %
Trend..... 21.09 %
Rank..... 11 of 12 based on:1990
Percent to total..... 1.09 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MOLLUSCS
Area.....PACIFIC, EASTERN CENTRAL
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 29.60 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6. PACIFIC, SOUTHEAST (Area 87)



Major producers of fish, crustaceans and molluscs (1990 ranking): Peru:49.28%, Chile:37.49%, USSR:9.46%, Ecuador:2.22%, Colombia:0.54%, Cuba:0.43%, Japan:0.18%, Other nei B:0.15%, Venezuela:0.13%, Mexico:0.06%, Panama:0.03%, Bulgaria:0.01%, Korea Rep:0.01%.

Major species and percentages based on 1990 ranking: South American pilchard:30.95%, Chilean jack mackerel:27.85%, Anchoveta(=Peruvian anchovy):27.44%, Chub mackerel:2.93%, Araucanian herring:2.17%, South Pacific hake:1.63%, Patagonian grenadier:0.93%, Western white shrimp:0.64%, Yellowfin tuna:0.63%, Patagonian hake:0.38%, Marine molluscs nei:0.37%, Skipjack tuna:0.35%, Deepbody thread herring:0.30%, Eastern Pacific bonito:0.29%, Pacific anchoveta:0.29%, Taca clam:0.18%, Magellan mussel:0.17%, Mullets nei:0.15%, Bigeye tuna:0.15%, Tuna-like fishes nei:0.14%,South Pacific breams:0.12%, Silversides(=Sand smelts):0.11%, Coho(=Silver)salmon:0.10%, Pink cusk-eel:0.10%, Chilean mussel:0.08%, Marine crabs nei:0.07%, Squids nei:0.07%, Atlantic salmon:0.07%, Macha clam:0.07%, Groupers, seabasses nei:0.07%, Gastropods nei:0.06%, Peruvian drum:0.06%, Smoothhounds:0.06%, Pacific menhaden:0.06%, Peruvian calico scallop:0.05%, Common squids:0.05%, Black cusk-eel:0.05%, Penaeus shrimps nei:0.05%, Drums:0.05%, Chilean nylon shrimp:0.05%, Swordfish:0.04%, Craylets, squat lobsters:0.04%, Skates and rays, nei:0.04%, Gadiformes nei:0.04%, Mackerel-like fishes nei:0.04%, Peruvian weakfish:0.04%, Southern blue whiting:0.03%, Octopuses:0.03%, OTHER SPECIES:0.33%.

6.1 Production of diadromous fish (ISSCAAP GROUPS 21-25).

Table 6.1.1

PACIFIC, SOUTHEAST
Diadromous fish (ISSCAAP GROUPS 21-25), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Coho(=Silver)salmon	1	13426	53.4 %	Sharp rise
Atlantic salmon	2	9498	37.7 %	Sharp rise
Rainbow trout	3	1853	7.4 %	Sharp rise
Chinook(=Spring=King)salmon	4	389	1.6 %	Sharp rise
TOTAL DIADROMOUS		25166	100.0 %	Sharp rise

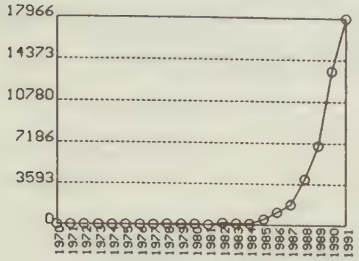
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: Chile 100%.

Table 6.1.2

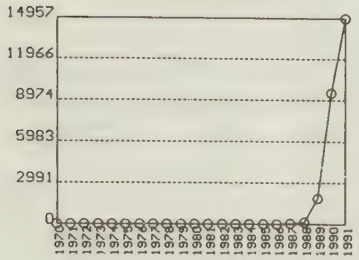
PACIFIC, SOUTHEAST
Ranking order and proportions of diadromous species (ISSCAAP GROUPS 21-25), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Coho(=Silver)salmon	1	64	1 100.0%	0	1 100.0%
Atlantic salmon	2	0	2 0.0%	0	2 0.0%
Rainbow trout	3	0	3 0.0%	0	3 0.0%
Chinook(=Spring=King)salmon	4	0	4 0.0%	0	4 0.0%
TOTALS		64	100.0%	0	100.0%



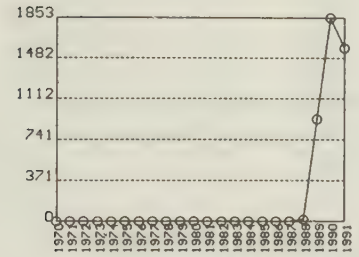
Year range.....1970-1991
Country.....CHILE
Species.....Coho(=Silver)salmon
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 0 %
Trend..... 79.95 %
Rank..... 1 of 5 based on:1990
Percent to total..... 53.35 % , Cumulative: 53.35 %



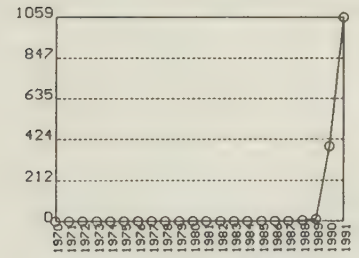
Year range.....1970-1991
Country.....CHILE
Species.....Atlantic salmon
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation.....
Trend..... 86.75 %
Rank..... 2 of 5 based on:1990
Percent to total..... 37.74 % , Cumulative: 91.09 %



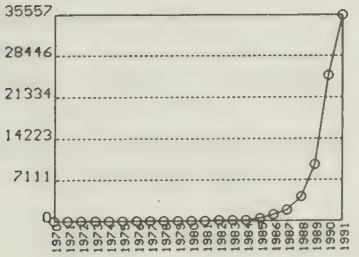
Year range.....1970-1991
Country.....CHILE
Species.....Rainbow trout
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 83.82 %
Rank..... 3 of 5 based on:1990
Percent to total..... 7.36 % , Cumulative: 98.45 %



Year range.....1970-1991
Country.....CHILE
Species.....Chinook(=Spring=King)salmon
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation.....
Trend..... 88.81 %
Rank..... 4 of 5 based on:1990
Percent to total..... 1.55 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....CHILE
Species.....TOTAL DIADROMOUS
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 0 %
Trend..... 82.62 %
Rank..... 5 of 5 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.2 Production of flounders, halibuts, soles, etc. (ISSCAAP GROUP 31). Negligible.

6.3 Production of cods, hakes, haddocks, etc. (ISSCAAP GROUP 32)

Table 6.3.1

PACIFIC, SOUTHEAST
Cods, hakes, haddocks, etc.,
(ISSCAAP GROUP 32), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
South Pacific hake	1	224624	54.3 %	Stable (-)
Patagonian grenadier	2	128002	30.9 %	Sharp rise
Patagonian hake	3	52112	12.6 %	Rising
Gadiformes nei	4	5407	1.3 %	Rising
Southern blue whiting	5	3931	1.0 %	Rising
Hakes nei	6	0	0.0 %	Rising
TOTAL CODS, HAKES, ETC.		414076	100.0 %	Rising

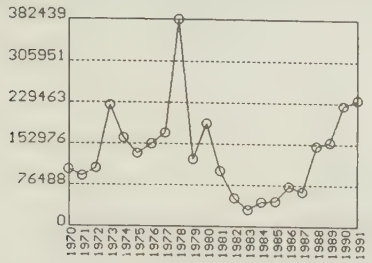
Proportion coming from declining catches.....	0.0 %
from stable catches.....	54.3 %
from rising catches.....	45.8 %

Major fishing countries ranked by 1990 production: Chile:58.51%, Peru:30.74%, USSR:10.75%.

Table 6.3.2

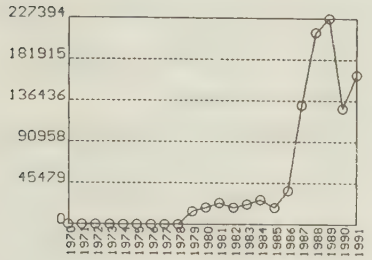
PACIFIC, SOUTHEAST
Ranking order and proportions of cods, hakes, haddocks, etc.,
(ISSCAAP GROUP 32), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
South Pacific hake	1	191438	1 76.5%	105500	1 100.0%
Patagonian grenadier	2	18361	3 7.3%	0	3 0.0%
Patagonian hake	3	36656	2 14.6%	0	2 0.0%
Gadiformes nei	4	592	5 0.2%	0	5 0.0%
Southern blue whiting	5	3288	4 1.3%	0	4 0.0%
Hakes nei	6	0	6 0.0%	0	6 0.0%
TOTALS		250335	100.0%	105500	100.0%



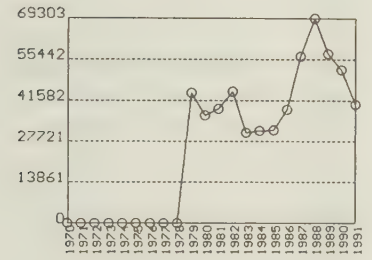
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....South Pacific hake
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -1.35 %
Rank..... 1 of 6 based on:1990
Percent to total..... 54.25 % , Cumulative: 54.25 %



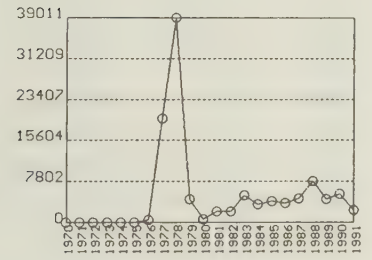
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Patagonian grenadier
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 64.78 %
Rank..... 2 of 6 based on:1990
Percent to total..... 30.91 % , Cumulative: 85.16 %



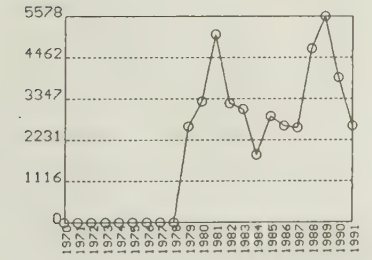
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Patagonian hake
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 43.09 %
Rank..... 3 of 6 based on:1990
Percent to total..... 12.59 % , Cumulative: 97.74 %



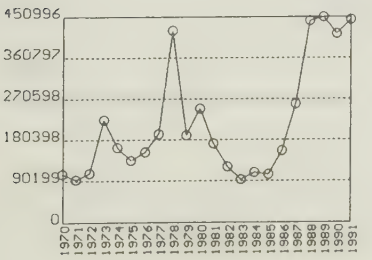
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Gadiformes nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 7.45 %
Rank..... 4 of 6 based on:1990
Percent to total..... 1.31 % , Cumulative: 99.05 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CODS, HAKES, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 41.00 %
Rank..... 5 of 6 based on:1990
Percent to total..... 0.95 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CODS, HAKES, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 18.87 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.4 Production of redfishes, basses, congers, etc. (ISSCAAP GROUP 33).

Table 6.4.1

PACIFIC, SOUTHEAST
Redfishes, basses, congers, etc. (ISSCAAP GROUP 33), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
South Pacific breams	1	17086	20.3 %	Rising
Pink cusk-eel	2	13203	15.7 %	Rising
Groupers, seabasses nei	3	9387	11.1 %	Sharp rise
Peruvian drum	4	8704	10.3 %	Rising
Black cusk-eel	5	6991	8.3 %	Sharp rise
Drums	6	6798	8.1 %	Stable (-)
Peruvian weakfish	7	5078	6.0 %	Rising
Peruvian rock seabass	8	3543	4.2 %	Rising
Southeast Pacific grunt	9	1859	2.2 %	Declining
Grunts, sweetlips, nei	10	1828	2.2 %	Declining
Croakers nei	11	1659	2.0 %	Rising
Cusk-eels nei	12	1652	2.0 %	Rising
Red cusk-eel	13	1323	1.6 %	Stable (-)
Scorpionfishes, nei	14	1109	1.3 %	Rising
Demersal percomorphs nei	15	995	1.2 %	Rising
Tilefishes	16	722	0.9 %	Declining
Patagonian blennie	17	610	0.7 %	Stable (-)
Groupers nei	18	412	0.5 %	Stable (+)
Yellow snapper	19	408	0.5 %	Rising
Pintadilla	20	278	0.3 %	Rising
Snappers, jobfishes, nei	21	158	0.2 %	Declining
Weakfishes nei	22	147	0.2 %	Stable (-)
Snappers nei	23	140	0.2 %	Rising
Sea catfishes nei	24	125	0.2 %	Declining
Snooks(=Robalos)nei	25	78	0.1 %	Rising
Porgies, seabreams, nei	26	27	0.0 %	Sharp rise
John dory	27	18	0.0 %	Sharp rise
Spotted grouper	28	18	0.0 %	Rising
Croakers, drums nei	29	8	0.0 %	Declining
Argentines	30	3	0.0 %	Sharp rise
Kingcroakers nei	31	0	0.0 %	Declining
Alfonsinos	32	0	0.0 %	Rising
Bluefin gurnard	33	0	0.0 %	Rising
TOTAL REDFISHES, BASSES, ETC.		84367	100.0 %	Rising

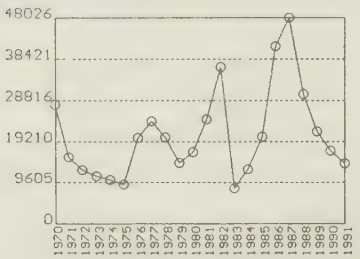
Proportion coming from declining catches.....	5.6 %
from stable catches.....	11.0 %
from rising catches.....	83.4 %

Major fishing countries ranked by 1990 production: Chile:50.26%, Peru:46.97%, Colombia:2.01%, Japan:0.72%, Cuba:0.03%.

Table 6.4.2

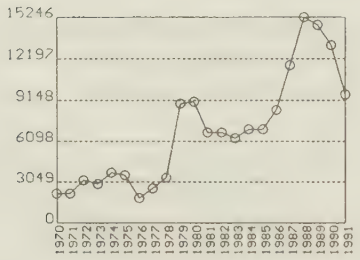
PACIFIC, SOUTHEAST
Ranking order and proportions of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
South Pacific breams	1	16785	1 29.0%	28000	1 45.8%
Pink cusk-eel	2	9069	3 15.7%	2200	6 3.6%
Groupers, seabasses nei	3	420	18 0.7%	100	16 0.2%
Peruvian drum	4	4230	4 7.3%	4000	4 6.6%
Black cusk-eel	5	0	33 0.0%	0	32 0.0%
Drums	6	9704	2 16.8%	7900	2 12.9%
Peruvian weakfish	7	2482	6 4.3%	2700	5 4.4%
Peruvian rock seabass	8	2093	8 3.6%	5000	3 8.2%
Southeast Pacific grunt	9	2820	5 4.9%	1900	7 3.1%
Grunts, sweetlips, nei	10	916	11 1.6%	1600	9 2.6%
Croakers nei	11	2174	7 3.8%	0	22 0.0%
Cusk-eels nei	12	1029	10 1.8%	1300	12 2.1%
Red cusk-eel	13	1849	9 3.2%	1400	11 2.3%
Scorpionfishes, nei	14	849	12 1.5%	400	14 0.7%
Demersal percomorphs nei	15	44	23 0.1%	100	20 0.2%
Tilefishes	16	781	13 1.4%	1700	8 2.8%
Patagonian blennie	17	574	15 1.0%	700	13 1.2%
Groupers nei	18	600	14 1.0%	1500	10 2.5%
Yellow snapper	19	458	16 0.8%	0	27 0.0%
Pintadilla	20	219	19 0.4%	300	15 0.5%
Snappers, jobfishes, nei	21	128	20 0.2%	100	19 0.2%
Weakfishes nei	22	45	22 0.1%	0	25 0.0%
Snappers nei	23	439	17 0.8%	100	17 0.2%
Sea catfishes nei	24	102	21 0.2%	0	21 0.0%
Snooks(=Robalos)nei	25	33	24 0.1%	0	23 0.0%
Porgies, seabreams, nei	26	0	31 0.0%	0	30 0.0%
John dory	27	0	29 0.0%	0	28 0.0%
Spotted grouper	28	0	28 0.0%	100	18 0.2%
Croakers, drums nei	29	10	26 0.0%	0	33 0.0%
Argentines	30	0	30 0.0%	0	29 0.0%
Kingcroakers nei	31	10	27 0.0%	0	26 0.0%
Alfonsinos	32	12	25 0.0%	0	24 0.0%
Bluefin gurnard	33	0	32 0.0%	0	31 0.0%
TOTALS		57875	100.0%	61100	100.0%



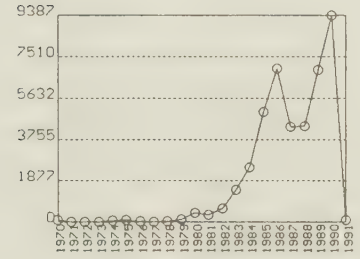
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....South Pacific breams
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 9.14 %
Rank..... 1 of 12 based on:1990
Percent to total..... 20.25 % , Cumulative: 20.25 %



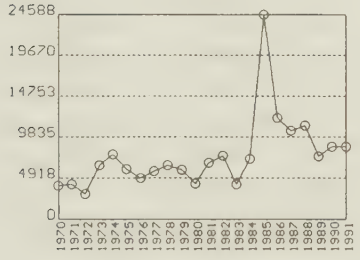
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pink cusk-eel
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 28.46 %
Rank..... 2 of 12 based on:1990
Percent to total..... 15.65 % , Cumulative: 35.90 %



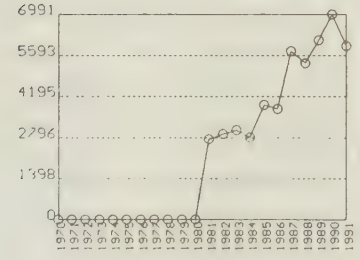
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Groupers, seabasses nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 57.09 %
Rank..... 3 of 12 based on:1990
Percent to total..... 11.13 % , Cumulative: 47.03 %



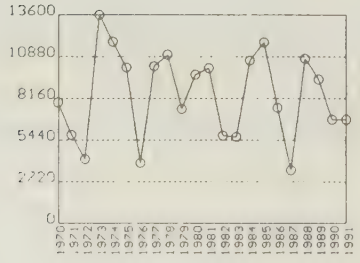
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Peruvian drum
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 16.07 %
Rank..... 4 of 12 based on:1990
Percent to total..... 10.32 % , Cumulative: 57.34 %



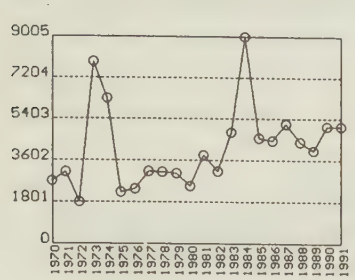
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Black cusk-eel
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 56.31 %
Rank..... 5 of 12 based on:1990
Percent to total..... 8.29 % , Cumulative: 65.63 %



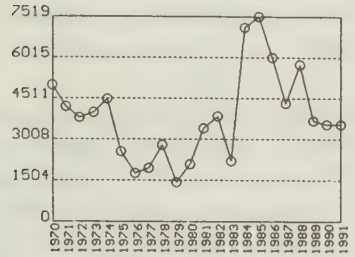
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Drums
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... -1.28 %
Rank..... 6 of 12 based on:1990
Percent to total..... 8.06 % , Cumulative: 73.69 %



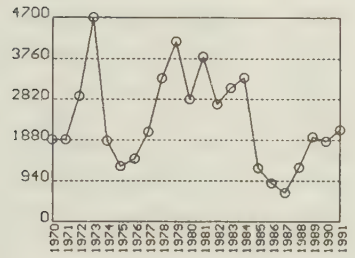
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Peruvian weakfish
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 7.29 %
Rank..... 7 of 12 based on:1990
Percent to total..... 6.02 % , Cumulative: 79.71 %



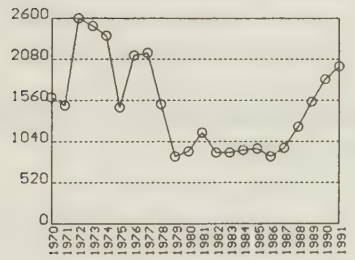
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Peruvian rock seabass
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 5.67 %
Rank..... 8 of 12 based on:1990
Percent to total..... 4.20 % , Cumulative: 83.91 %



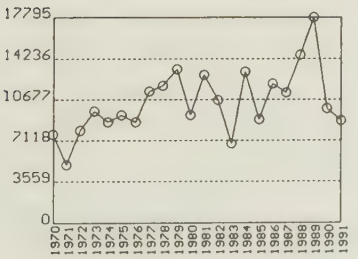
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Southeast Pacific grunt
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... -6.93 %
Rank..... 9 of 12 based on:1990
Percent to total..... 2.20 % , Cumulative: 86.11 %



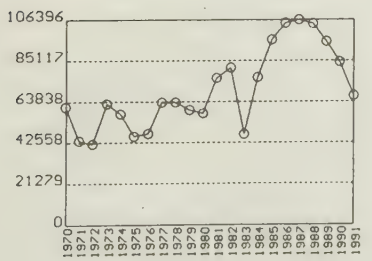
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Grunts, sweetlips, nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -9.21 %
Rank..... 10 of 12 based on:1990
Percent to total..... 2.17 % , Cumulative: 88.28 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER REDFISHES, BASSES, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 7.64 %
Rank..... 11 of 12 based on:1990
Percent to total..... 11.72 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL REDFISHES, BASSES, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 11.92 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.5 Production of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34).

Table 6.5.1

PACIFIC, SOUTHEAST
Jacks, mullets, sauries, etc. (ISSCAAP GROUP 34),
ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Chilean jack mackerel	1	3828452	99.0 %	Rising
Mullets nei	2	21144	0.6 %	Rising
Silversides(=Sand smelts)	3	15790	0.4 %	Rising
Flathead grey mullet	4	929	0.0 %	Rising
Pompanos	5	921	0.0 %	Rising
Common dolphinfish	6	743	0.0 %	Sharp rise
Pelagic percomorphs nei	7	396	0.0 %	Rising
Flyingfishes nei	8	382	0.0 %	Declining
Jacks, crevalles, nei	9	280	0.0 %	Rising
Butterfishes, silver pomfrets	10	10	0.0 %	Declining
Threadfins, tasselfishes nei	11	0	0.0 %	Declining
Jack and horse mackerels nei	12	0	0.0 %	Stable (-)
TOTAL JACKS, MULLETS, ETC.		3869047	100.0 %	Rising

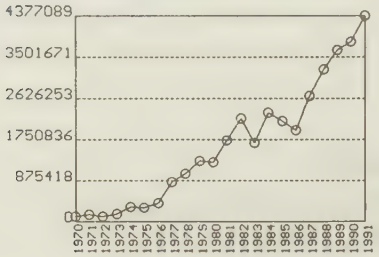
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: Chile:64.07%, USSR:29.01%, Peru:5.79%, Cuba:1.06%, Bulgaria:0.04%, Colombia:0.01%.

Table 6.5.2

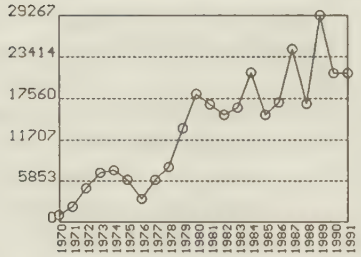
PACIFIC, SOUTHEAST
Ranking order and proportions of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Chilean jack mackerel	1	1279608	1 97.5%	108700	1 94.0%
Mullets nei	2	18218	2 1.4%	1000	3 0.9%
Silversides(=Sand smelts)	3	4864	4 0.4%	5400	2 4.7%
Flathead grey mullet	4	513	6 0.0%	300	5 0.3%
Pompanos	5	181	7 0.0%	300	4 0.3%
Common dolphinfish	6	144	8 0.0%	0	12 0.0%
Pelagic percomorphs nei	7	102	9 0.0%	0	8 0.0%
Flyingfishes nei	8	7830	3 0.6%	0	7 0.0%
Jacks, crevalles, nei	9	67	11 0.0%	0	10 0.0%
Butterfishes, silver pomfrets	10	0	12 0.0%	0	11 0.0%
Threadfins, tasselfishes nei	11	81	10 0.0%	0	9 0.0%
Jack and horse mackerels nei	12	1031	5 0.1%	0	6 0.0%
TOTALS		1312639	100.0%	115700	100.0%



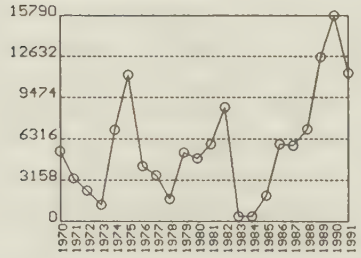
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chilean jack mackerel
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 42.10 %
Rank..... 1 of 11 based on:1990
Percent to total..... 98.95 % , Cumulative: 98.95 %



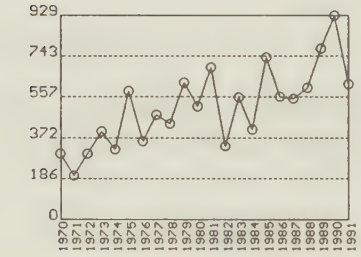
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mullets nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 28.93 %
Rank..... 2 of 11 based on:1990
Percent to total..... 0.55 % , Cumulative: 99.50 %



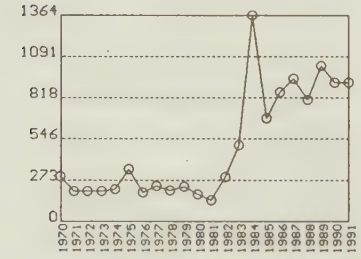
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Silversides(=Sand smelts)
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 17.57 %
Rank..... 3 of 11 based on:1990
Percent to total..... 0.41 % , Cumulative: 99.91 %



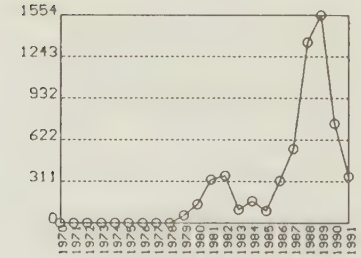
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flathead grey mullet
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 19 %
Trend..... 14.36 %
Rank..... 4 of 11 based on:1990
Percent to total..... 0.02 % , Cumulative: 99.93 %



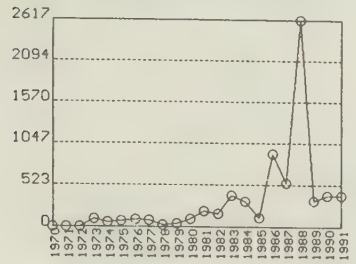
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pompanos
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 31.33 %
Rank..... 5 of 11 based on:1990
Percent to total..... 0.02 % , Cumulative: 99.95 %



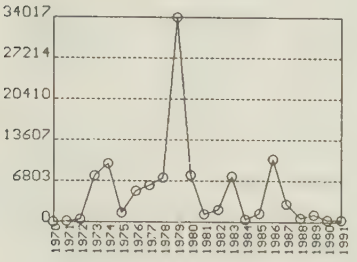
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Common dolphinfish
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 58.61 %
Rank..... 6 of 11 based on:1990
Percent to total..... 0.02 % , Cumulative: 99.97 %



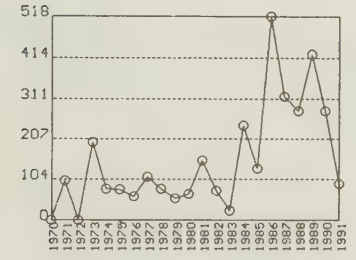
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pelagic percomorphs nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 49.41 %
Rank..... 7 of 11 based on:1990
Percent to total..... 0.01 % , Cumulative: 99.98 %



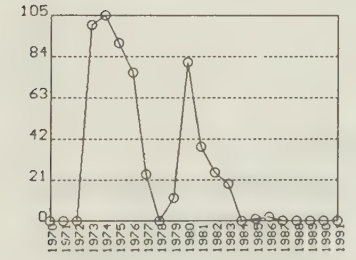
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flyingfishes nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... -9.70 %
Rank..... 8 of 11 based on:1990
Percent to total..... 0.01 % , Cumulative: 99.99 %



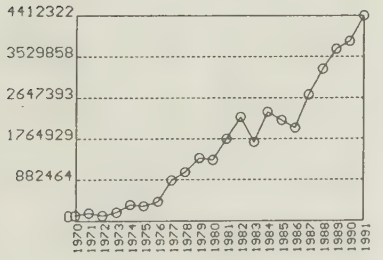
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Jacks, crevalles, nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 29.90 %
Rank..... 9 of 11 based on:1990
Percent to total..... 0.01 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Threadfins, tasselfishes nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend.....-34.81 %
Rank..... 10 of 11 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL JACKS, MULLETS, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 41.74 %
Rank..... 11 of 11 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.6 Production of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35).

Table 6.6.1

PACIFIC, SOUTHEAST
Herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
South American pilchard	1	4253718	50.6 %	Rising
Anchoveta(=Peruvian anchovy)	2	3771577	44.8 %	Declining
Araucanian herring	3	298700	3.6 %	Rising
Deepbody thread herring	4	41684	0.5 %	Sharp rise
Pacific anchoveta	5	39193	0.5 %	Rising
Pacific menhaden	6	7571	0.1 %	Declining
Clupeoids nei	7	0	0.0 %	Declining
TOTAL HERRINGS, SARDINES, ETC.		8412443	100.0 %	Rising

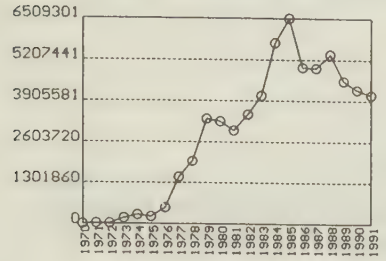
Proportion coming from declining catches.....	44.9 %
from stable catches.....	0.0 %
from rising catches.....	55.1 %

Major fishing countries ranked by 1990 production: Peru:73.68%, Chile:24.16%, Ecuador:1.11%, USSR:0.70%, Colombia:0.19%, Cuba:0.16%.

Table 6.6.2

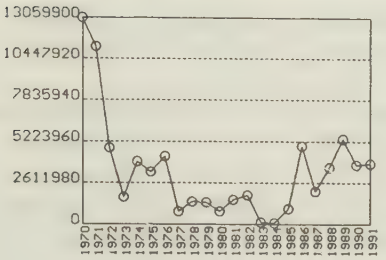
PACIFIC, SOUTHEAST
Ranking order and proportions of herrings, sardines, anchovies, etc. (ISSCAAP GROUP 35), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
South American pilchard	1	3253365	1 78.6%	11400	4 0.1%
Anchoveta(=Peruvian anchovy)	2	822818	2 19.9%	13059900	1 99.3%
Araucanian herring	3	33319	3 0.8%	57200	2 0.4%
Deepbody thread herring	4	0	7 0.0%	0	7 0.0%
Pacific anchoveta	5	15134	4 0.4%	300	6 0.0%
Pacific menhaden	6	12610	5 0.3%	20400	3 0.2%
Clupeoids nei	7	2915	6 0.1%	600	5 0.0%
TOTALS		4140161	100.0%	13149800	100.0%



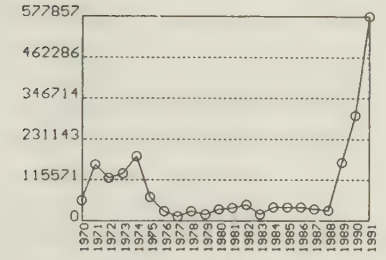
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....South American pilchard
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 36.86 %
Rank..... 1 of 6 based on:1990
Percent to total..... 50.56 % , Cumulative: 50.56 %



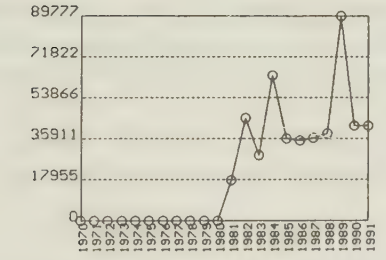
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Anchoveta(=Peruvian anchovy)
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-19.79 %
Rank..... 2 of 6 based on:1990
Percent to total..... 44.83 % , Cumulative: 95.40 %



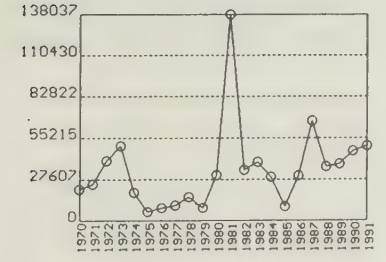
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Araucanian herring
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 21.71 %
Rank..... 3 of 6 based on:1990
Percent to total..... 3.55 % , Cumulative: 98.95 %



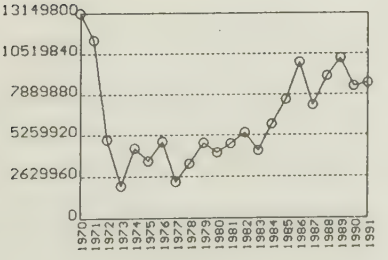
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Deepbody thread herring
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 52.20 %
Rank..... 4 of 6 based on:1990
Percent to total..... 0.50 % , Cumulative: 99.44 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER HERRINGS, SARDINES, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 12.14 %
Rank..... 5 of 6 based on:1990
Percent to total..... 0.56 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL HERRINGS, SARDINES, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 6.30 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.7 Production of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36).

Table 6.7.1

PACIFIC, SOUTHEAST
Tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Yellowfin tuna	1	86041	38.7 %	Rising
Skipjack tuna	2	47473	21.4 %	Rising
Eastern Pacific bonito	3	40251	18.1 %	Declining
Bigeye tuna	4	20837	9.4 %	Rising
Tuna-like fishes nei	5	18719	8.4 %	Sharp rise
Swordfish	6	5978	2.7 %	Rising
Striped marlin	7	1271	0.6 %	Stable (+)
Pacific sierra	8	956	0.4 %	Rising
Albacore	9	495	0.2 %	Stable (+)
Indo-Pacific blue marlin	10	243	0.1 %	Rising
Marlins,sailfishes,spearfishes	11	51	0.0 %	Rising
Black skipjack	12	50	0.0 %	Rising
Indo-Pacific sailfish	13	18	0.0 %	Declining
Tunas nei	14	0	0.0 %	Declining
Northern bluefin tuna	15	0	0.0 %	Sharp decl
Southern bluefin tuna	16	0	0.0 %	Rising
TOTAL TUNAS, BONITOS, ETC.		222383	100.0 %	Rising

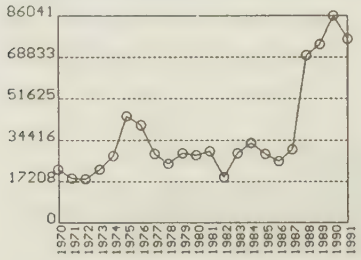
Proportion coming from declining catches.....	18.1 %
from stable catches.....	0.8 %
from rising catches.....	81.1 %

Major fishing countries ranked by 1990 production: Ecuador:22.86%, Colombia:22.35%, Peru:18.70%, Japan:9.89%, Other nei B:9.26%, Venezuela:8.06%, Mexico:3.84%, Chile:2.42%, Panama:2.15%, El Salvador:0.22%, Korea Rep:0.19%, USSR:0.04%, Cuba:0.02%.

Table 6.7.2

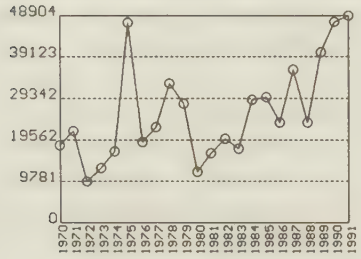
PACIFIC, SOUTHEAST
Ranking order and proportions of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Yellowfin tuna	1	28397	1 37.7%	22440	2 19.2%
Skipjack tuna	2	12148	3 16.1%	18410	3 15.7%
Eastern Pacific bonito	3	9509	4 12.6%	62420	1 53.3%
Bigeye tuna	4	17872	2 23.7%	6110	4 5.2%
Tuna-like fishes nei	5	737	10 1.0%	1390	6 1.2%
Swordfish	6	896	8 1.2%	3600	5 3.1%
Striped marlin	7	1543	6 2.1%	1200	7 1.0%
Pacific sierra	8	845	9 1.1%	400	10 0.3%
Albacore	9	945	7 1.3%	400	9 0.3%
Indo-Pacific blue marlin	10	510	11 0.7%	500	8 0.4%
Marlins,sailfishes,spearfishes	11	102	12 0.1%	0	16 0.0%
Black skipjack	12	1699	5 2.3%	0	12 0.0%
Indo-Pacific sailfish	13	66	13 0.1%	200	11 0.2%
Tunas nei	14	36	14 0.1%	0	13 0.0%
Northern bluefin tuna	15	0	15 0.0%	0	14 0.0%
Southern bluefin tuna	16	0	16 0.0%	0	15 0.0%
TOTALS		75305	100.0%	117070	100.0%



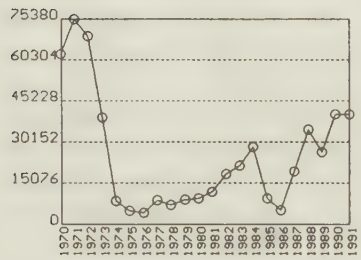
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowfin tuna
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 20.58 %
Rank..... 1 of 12 based on:1990
Percent to total..... 38.69 % , Cumulative: 38.69 %



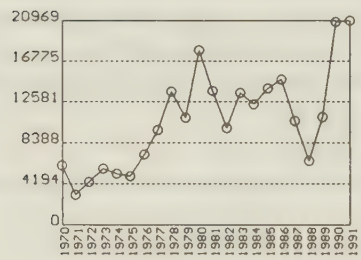
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skipjack tuna
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... 13.90 %
Rank..... 2 of 12 based on:1990
Percent to total..... 21.35 % , Cumulative: 60.04 %



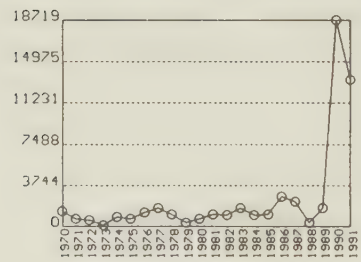
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Eastern Pacific bonito
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend.....-11.71 %
Rank..... 3 of 12 based on:1990
Percent to total..... 18.10 % , Cumulative: 78.14 %



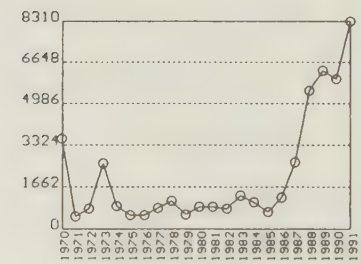
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeye tuna
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 18.75 %
Rank..... 4 of 12 based on:1990
Percent to total..... 9.37 % , Cumulative: 87.51 %



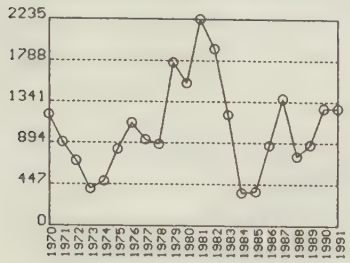
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tuna-like fishes nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 51.81 %
Rank..... 5 of 12 based on:1990
Percent to total..... 8.42 % , Cumulative: 95.93 %



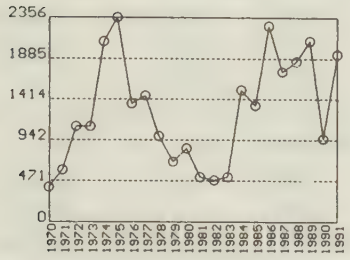
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Swordfish
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 34.24 %
Rank..... 6 of 12 based on:1990
Percent to total..... 2.69 % , Cumulative: 98.61 %



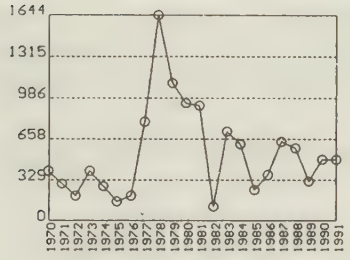
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Striped marlin
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 3.92 %
Rank..... 7 of 12 based on:1990
Percent to total..... 0.57 % , Cumulative: 99.18 %



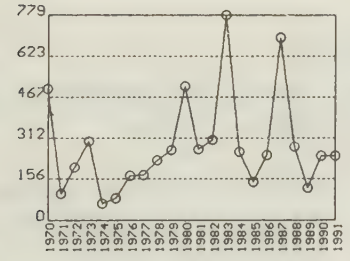
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific sierra
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 9.05 %
Rank..... 8 of 12 based on:1990
Percent to total..... 0.43 % , Cumulative: 99.61 %



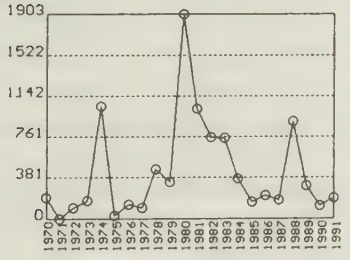
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Albacore
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 3.31 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.22 % , Cumulative: 99.84 %



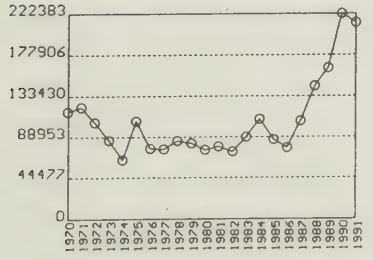
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indo-Pacific blue marlin
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 6.14 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.11 % , Cumulative: 99.95 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER TUNAS, BONITOS, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 5.12 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.05 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL TUNAS, BONITOS, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 11.69 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.8 Production of mackerels, snoeks, cutlassfishes, etc. (ISSCAAP GROUP 37).

Table 6.8.1

PACIFIC, SOUTHEAST
Mackerels, snoeks, cutlassfishes, etc.,
(ISSCAAP GROUP 37), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Chub mackerel	1	402370	98.7 %	Rising
Mackerel-like fishes nei	2	5107	1.3 %	Sharp rise
Snoek	3	144	0.0 %	Sharp decl
TOTAL MACKERELS, SNOEKS, ETC.		407621	100.0 %	Rising

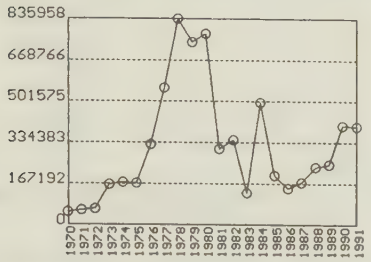
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: Chile:47.37%, Ecuador:18.27%, USSR:18.20%, Peru:14.91%, Cuba:1.25%.

Table 6.8.2

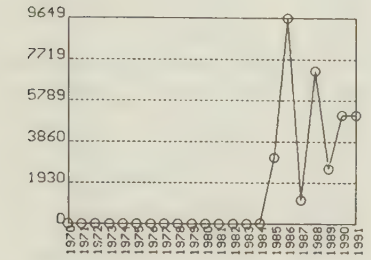
PACIFIC, SOUTHEAST
Ranking order and proportions of mackerels, snoeks, cutlassfishes, etc.,
(ISSCAAP GROUP 37), in 1990,1980 and 1970

SPECIES	RANK IN 1990	-1980- CATCH (MT)	-1980- RANK AND PERCENT	-1970- CATCH (MT)	-1970- RANK AND PERCENT
Chub mackerel	1	776792	1 100.0%	51800	1 87.8%
Mackerel-like fishes nei	2	0	3 0.0%	0	3 0.0%
Snoek	3	64	2 0.0%	7200	2 12.2%
TOTALS		776856	100.0%	59000	100.0%



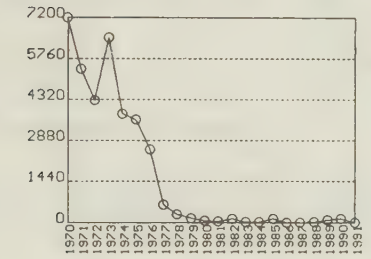
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chub mackerel
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 6.83 %
Rank..... 1 of 4 based on:1990
Percent to total..... 98.71 % , Cumulative: 98.71 %



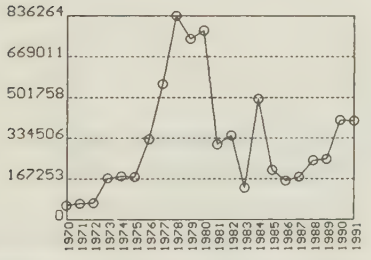
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mackerel-like fishes nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 12 %
Trend..... 64.76 %
Rank..... 2 of 4 based on:1990
Percent to total..... 1.25 % , Cumulative: 99.96 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Snoek
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend.....-66.16 %
Rank..... 3 of 4 based on:1990
Percent to total..... 0.04 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MACKERELS, SNOEKS, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 6.74 %
Rank..... 4 of 4 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.9 Production of sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38).

Table 6.9.1

PACIFIC, SOUTHEAST
Sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Smoothhounds	1	8066	41.0 %	Stable (-)
Skates and rays, nei	2	5628	28.6 %	Rising
Elephantfishes	3	2900	14.7 %	Rising
Sharks, rays, skates, etc	4	2346	11.9 %	Rising
Peruvian guitarfish	5	539	2.7 %	Rising
Angelsharks, sand devils	6	190	1.0 %	Rising
TOTAL SHARKS, RAYS, ETC.		19669	100.0 %	Rising

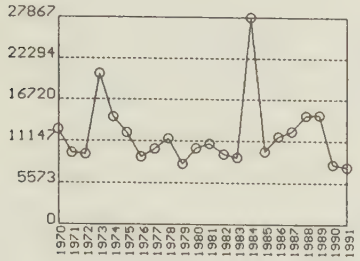
Proportion coming from declining catches.....	0.0 %
from stable catches.....	41.0 %
from rising catches.....	59.0 %

Major fishing countries ranked by 1990 production: Peru:63.85%, Chile:26.66%, Japan:6.53%, Colombia:2.96%.

Table 6.9.2

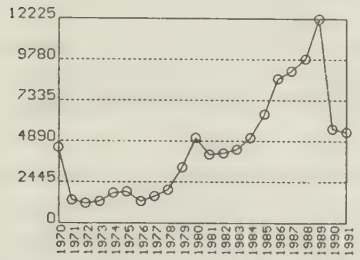
PACIFIC, SOUTHEAST
Ranking order and proportions of sharks, rays, chimaeras, etc., (ISSCAAP GROUP 38), in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Smoothhounds	1	10162	1 52.3%	12700	1 62.9%
Skates and rays, nei	2	5092	2 26.2%	4500	2 22.3%
Elephantfishes	3	1289	4 6.6%	100	6 0.5%
Sharks, rays, skates, etc	4	1727	3 8.9%	700	4 3.5%
Peruvian guitarfish	5	926	5 4.8%	1700	3 8.4%
Angelsharks, sand devils	6	237	6 1.2%	500	5 2.5%
TOTALS		19433	100.0%	20200	100.0%



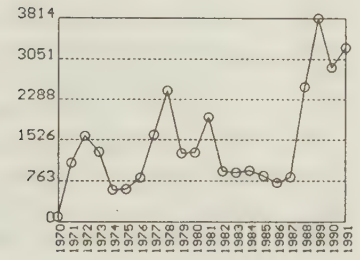
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Smoothhounds
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... -0.60 %
Rank..... 1 of 6 based on:1990
Percent to total..... 41.01 % , Cumulative: 41.01 %



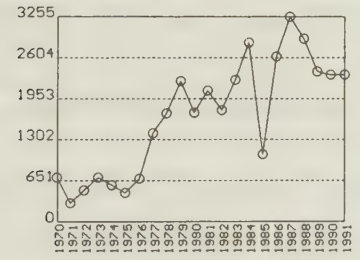
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skates and rays, nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 28.94 %
Rank..... 2 of 6 based on:1990
Percent to total..... 28.61 % , Cumulative: 69.62 %



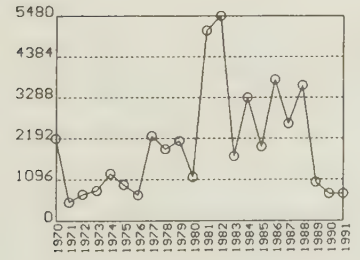
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Elephantfishes
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 19.91 %
Rank..... 3 of 6 based on:1990
Percent to total..... 14.74 % , Cumulative: 84.37 %



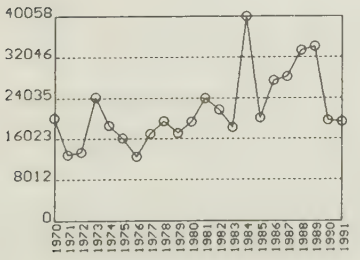
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sharks, rays, skates, etc
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 25.03 %
Rank..... 4 of 6 based on:1990
Percent to total..... 11.93 % , Cumulative: 96.29 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER SHARKS, RAYS, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 19 %
Trend..... 9.90 %
Rank..... 5 of 6 based on:1990
Percent to total..... 3.71 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL SHARKS, RAYS, ETC.
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 9.96 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.10 Production of crustaceans (ISSCAAP GROUPS 41-47).

Table 6.10.1

PACIFIC, SOUTHEAST
Crustaceans (ISSCAAP GROUPS 41-47), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Western white shrimp	1	87338	69.3 %	Rising
Marine crabs nei	2	9706	7.7 %	Rising
Penaeus shrimps nei	3	6855	5.4 %	Rising
Chilean nylon shrimp	4	6626	5.3 %	Declining
Craylets, squat lobsters	5	5796	4.6 %	Declining
Whiteleg shrimp	6	3000	2.4 %	Sharp rise
Marine crustaceans nei	7	2294	1.8 %	Declining
Southern king crab	8	1834	1.5 %	Rising
Pacific seabobs	9	1702	1.4 %	Declining
Natantian decapods nei	10	664	0.5 %	Rising
Tropical spiny lobsters nei	11	136	0.1 %	Declining
Juan Fernandez rock lobster	12	19	0.0 %	Declining
TOTAL CRUSTACEANS		125970	100.0 %	Rising

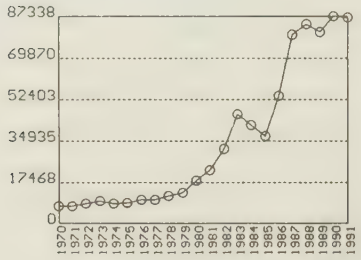
Proportion coming from declining catches.....	13.2 %
from stable catches.....	0.0 %
from rising catches.....	86.9 %

Major fishing countries ranked by 1990 production: Ecuador:67.47%, Chile:17.59%, Peru:10.98%, Colombia:3.95%.

Table 6.10.2

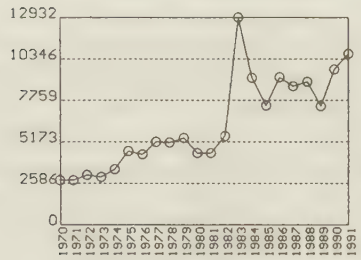
PACIFIC, SOUTHEAST
Ranking order and proportions of crustaceans (ISSCAAP GROUPS 41-47), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Western white shrimp	1	18238	1 51.8%	7300	3 11.1%
Marine crabs nei	2	4497	2 12.8%	2800	5 4.2%
Penaeus shrimps nei	3	807	8 2.3%	300	8 0.5%
Chilean nylon shrimp	4	2699	4 7.7%	9700	2 14.7%
Craylets, squat lobsters	5	3417	3 9.7%	40400	1 61.2%
Whiteleg shrimp	6	0	12 0.0%	0	11 0.0%
Marine crustaceans nei	7	1031	7 2.9%	1900	6 2.9%
Southern king crab	8	1351	6 3.8%	400	7 0.6%
Pacific seabobs	9	2337	5 6.6%	2900	4 4.4%
Natantian decapods nei	10	531	9 1.5%	0	12 0.0%
Tropical spiny lobsters nei	11	287	10 0.8%	200	9 0.3%
Juan Fernandez rock lobster	12	17	11 0.1%	100	10 0.2%
TOTALS		35212	100.0%	66000	100.0%



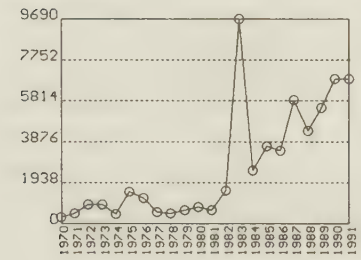
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Western white shrimp
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 43.46 %
Rank..... 1 of 12 based on:1990
Percent to total..... 69.33 % , Cumulative: 69.33 %



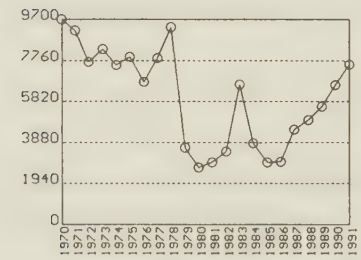
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine crabs nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 21.07 %
Rank..... 2 of 12 based on:1990
Percent to total..... 7.71 % , Cumulative: 77.04 %



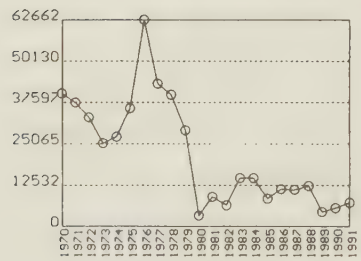
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Penaeus shrimps nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 41.42 %
Rank..... 3 of 12 based on:1990
Percent to total..... 5.44 % , Cumulative: 82.48 %



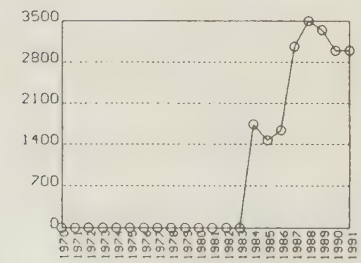
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chilean nylon shrimp
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-11.47 %
Rank..... 4 of 12 based on:1990
Percent to total..... 5.26 % , Cumulative: 87.74 %



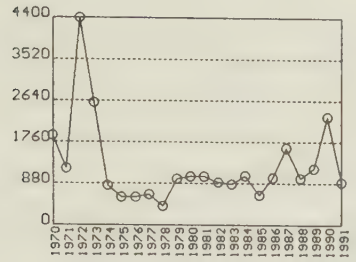
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Craylets, squat lobsters
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend.....-29.92 %
Rank..... 5 of 12 based on:1990
Percent to total..... 4.60 % , Cumulative: 92.34 %



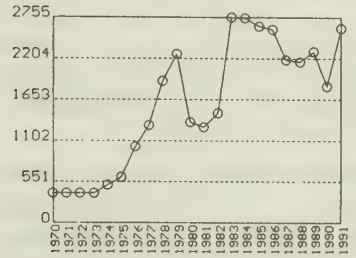
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Whiteleg shrimp
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 65.49 %
Rank..... 6 of 12 based on:1990
Percent to total..... 2.38 % , Cumulative: 94.72 %



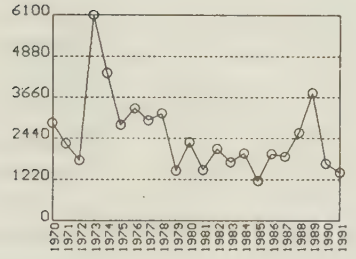
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine crustaceans nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -9.16 %
Rank..... 7 of 12 based on:1990
Percent to total..... 1.82 % , Cumulative: 96.54 %



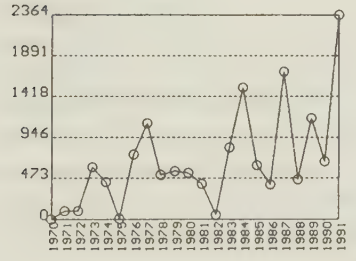
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Southern king crab
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 25.03 %
Rank..... 8 of 12 based on:1990
Percent to total..... 1.46 % , Cumulative: 98.00 %



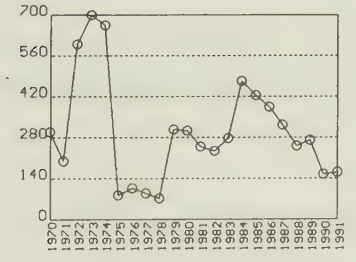
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific seabobs
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend.....-10.53 %
Rank..... 9 of 12 based on:1990
Percent to total..... 1.35 % , Cumulative: 99.35 %



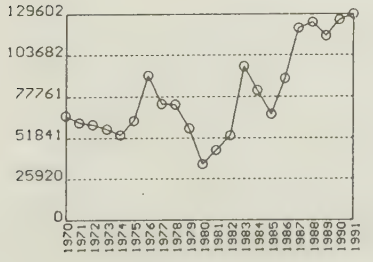
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Natantian decapods nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 17 %
Trend..... 28.92 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.53 % , Cumulative: 99.88 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CRUSTACEANS
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... -7.12 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.13 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CRUSTACEANS
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 14.03 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

6.11 Production of molluscs (ISSCAAP GROUPS 51-58).

Table 6.11.1

PACIFIC, SOUTHEAST
Molluscs (ISSCAAP GROUPS 51-58), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Marine molluscs nei	1	51193	31.7 %	Rising
Taca clam	2	24089	14.9 %	Rising
Magellan mussel	3	23550	14.6 %	Declining
Chilean mussel	4	10854	6.7 %	Rising
Squids nei	5	9684	6.0 %	Sharp rise
Macha clam	6	9397	5.8 %	Rising
Gastropods nei	7	8734	5.4 %	Rising
Peruvian calico scallop	8	7417	4.6 %	Rising
Common squids	9	7074	4.4 %	Sharp rise
Octopuses	10	3875	2.4 %	Sharp rise
Clams nei	11	2735	1.7 %	Rising
Sea mussels nei	12	1514	0.9 %	Sharp rise
Scallops nei	13	912	0.6 %	Sharp rise
Sea snail	14	227	0.1 %	Stable (+)
Chilean flat oyster	15	221	0.1 %	Rising
Pacific cupped oyster	16	153	0.1 %	Sharp rise
Stromboid conchs	17	2	0.0 %	Sharp rise
Cuttlefishes, bobtail squids	18	0	0.0 %	Sharp rise
TOTAL MOLLUSCS		161631	100.0 %	Rising

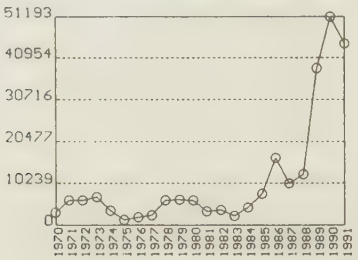
Proportion coming from declining catches.....	14.6 %
from stable catches.....	0.1 %
from rising catches.....	85.3 %

Major fishing countries ranked by 1990 production: Chile:65.41%, Peru:32.81%, Japan:0.83%, Ecuador:0.41%, Korea Rep:0.29%, Cuba:0.21%, Colombia:0.04%.

Table 6.11.2

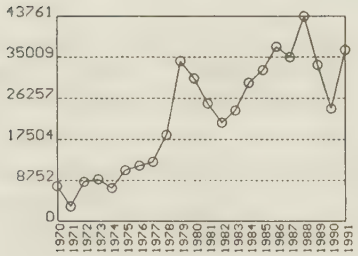
PACIFIC, SOUTHEAST
Ranking order and proportions of molluscs (ISSCAAP GROUPS 51-58), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Marine molluscs nei	1	6170	6 5.1%	3000	6 5.6%
Taca clam	2	30571	1 25.2%	7500	2 14.1%
Magellan mussel	3	25274	2 20.8%	23500	1 44.2%
Chilean mussel	4	10795	4 8.9%	5900	3 11.1%
Squids nei	5	36	14 0.0%	500	9 0.9%
Macha clam	6	4334	9 3.6%	5000	4 9.4%
Gastropods nei	7	8959	5 7.4%	500	8 0.9%
Peruvian calico scallop	8	4411	8 3.6%	400	10 0.8%
Common squids	9	198	11 0.2%	300	12 0.6%
Octopuses	10	59	13 0.1%	0	13 0.0%
Clams nei	11	5226	7 4.3%	2500	7 4.7%
Sea mussels nei	12	122	12 0.1%	0	14 0.0%
Scallops nei	13	0	18 0.0%	0	17 0.0%
Sea snail	14	24856	3 20.5%	3800	5 7.1%
Chilean flat oyster	15	239	10 0.2%	300	11 0.6%
Pacific cupped oyster	16	0	15 0.0%	0	18 0.0%
Stromboid conchs	17	0	16 0.0%	0	15 0.0%
Cuttlefishes, bobtail squids	18	0	17 0.0%	0	16 0.0%
TOTALS		121250	100.0%	53200	100.0%



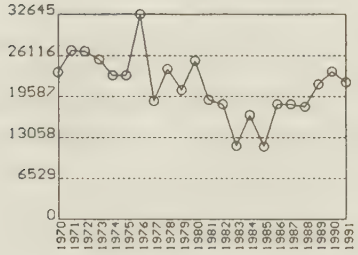
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine molluscs nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 47.19 %
Rank..... 1 of 12 based on:1990
Percent to total..... 31.67 % , Cumulative: 31.67 %



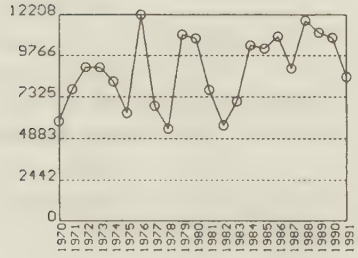
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Taca clam
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 25.33 %
Rank..... 2 of 12 based on:1990
Percent to total..... 14.90 % , Cumulative: 46.58 %



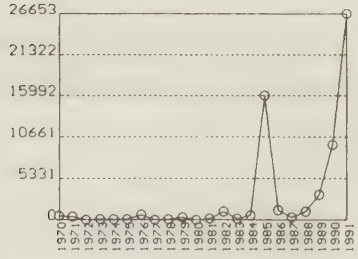
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Magellan mussel
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 16 %
Trend..... -6.40 %
Rank..... 3 of 12 based on:1990
Percent to total..... 14.57 % , Cumulative: 61.15 %



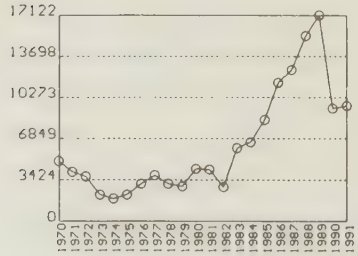
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chilean mussel
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 19 %
Trend..... 5.45 %
Rank..... 4 of 12 based on:1990
Percent to total..... 6.72 % , Cumulative: 67.86 %



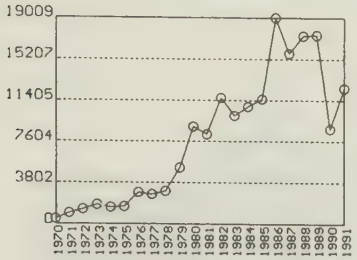
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Squids nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 66.36 %
Rank..... 5 of 12 based on:1990
Percent to total..... 5.99 % , Cumulative: 73.85 %



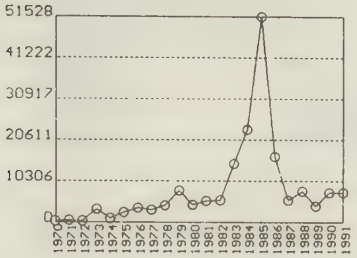
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Macha clam
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 29.40 %
Rank..... 6 of 12 based on:1990
Percent to total..... 5.81 % , Cumulative: 79.67 %



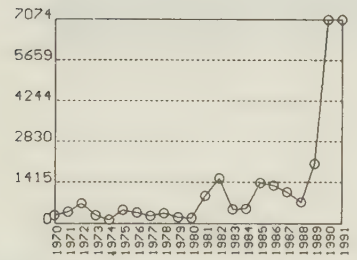
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Gastropods nei
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 36.77 %
Rank..... 7 of 12 based on:1990
Percent to total..... 5.40 % , Cumulative: 85.07 %



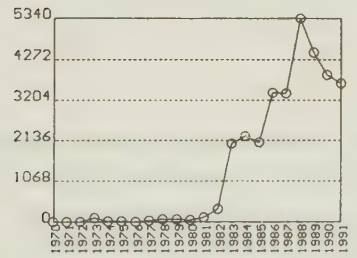
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Peruvian calico scallop
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 30.00 %
Rank..... 8 of 12 based on:1990
Percent to total..... 4.59 % , Cumulative: 89.66 %



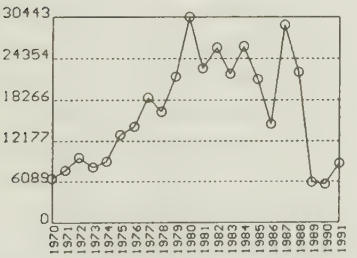
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Common squids
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 52.31 %
Rank..... 9 of 12 based on:1990
Percent to total..... 4.38 % , Cumulative: 94.04 %



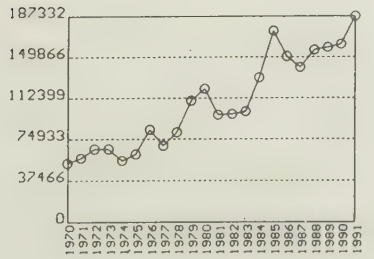
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Octopuses
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 59.75 %
Rank..... 10 of 12 based on:1990
Percent to total..... 2.40 % , Cumulative: 96.43 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MOLLUSCS
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

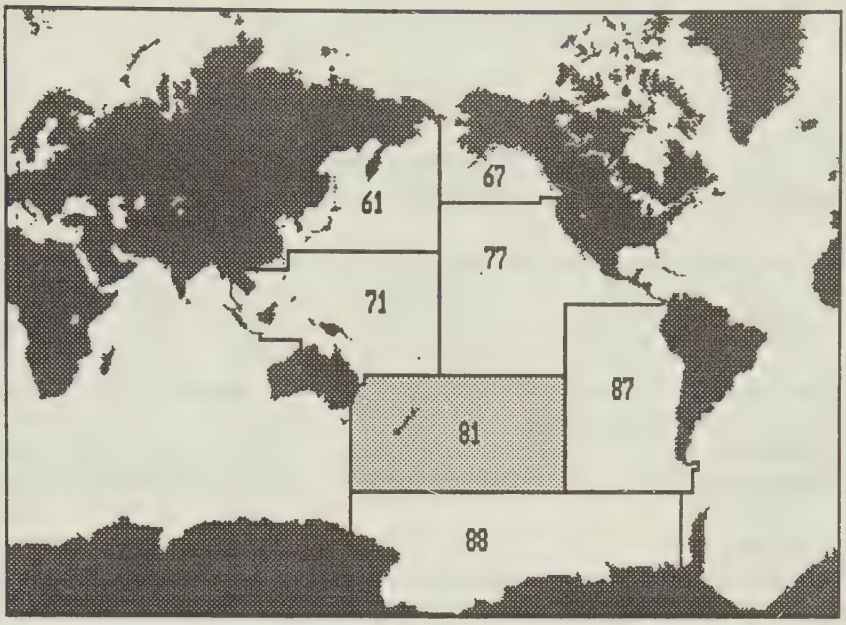
Fluctuation..... 12 %
Trend..... 7.02 %
Rank..... 11 of 12 based on:1990
Percent to total..... 3.56 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MOLLUSCS
Area.....PACIFIC, SOUTHEAST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 20.18 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7. PACIFIC, SOUTHWEST (Area 81)



Major producers of fish, crustaceans and molluscs (1990 ranking): New Zealand:55.27%, Japan:22.55%, USSR:12.64%, Australia:5.69%, Korea Rep:2.08%, Other nei A:1.24%, USA:0.42%, Norway:0.11%.

Major species and percentages based on 1990 ranking: Blue grenadier:38.99%, Greenback horse mackerel:6.72%, Squids nei:5.50%, Orange roughy:4.93%, Jack and horse mackerels nei:4.25%, Southern blue whiting:4.21%, Wellington flying squid:3.79%, Snoek:2.93%, New Zealand mussel:2.39%, Oreo dories:2.07%, Demersal percomorphs nei:1.52%, Albacore:1.38%, South Pacific breams:1.24%, Cusk-eels nei:1.17%, Southern hake:0.96%, Golden snapper:0.95%, Royal escolar:0.92%, Ruff(=Australian salmon):0.91%, Gadiformes nei:0.82%, Blue mackerel:0.76%, Cupped oysters nei:0.72%, New Zealand red cod:0.72%, Mullets nei:0.69%, Butterfishes, silver pomfrets:0.66%, Sharks, rays, skates, etc:0.64%, Tarakihi:0.50%, Skipjack tuna:0.47%, Dogfish sharks nei:0.43%, Southern bluefin tuna:0.42%, New Zealand dredge oyster:0.38%, Cardinal fish:0.35%, Pelagic percomorphs nei:0.35%, Morwongs:0.34%, Flatfishes nei:0.33%, Bluefin gurnard:0.31%, Red rock lobster:0.31%, New Zealand trevally:0.29%, Requiem sharks:0.25%, OTHER SPECIES:5.38%.

7.1 Production of diadromous fish (ISSCAAP GROUPS 21-25).

Table 7.1.1

PACIFIC, SOUTHWEST
Diadromous fish (ISSCAAP GROUPS 21-25), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Chinook(=Spring=King)salmon	1	2300	37.7 %	Sharp rise
Atlantic salmon	2	1750	28.7 %	Sharp rise
Short-finned eel	3	1309	21.4 %	Stable (-)
Rainbow trout	4	750	12.3 %	Sharp rise
TOTAL DIADROMOUS		6109	100.0 %	Rising

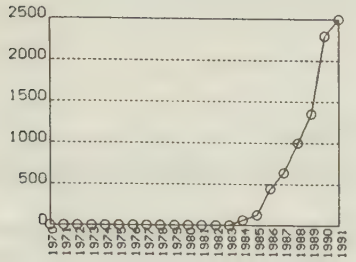
Proportion coming from declining catches.....	0.0 %
from stable catches.....	21.4 %
from rising catches.....	78.6 %

Major fishing countries ranked by 1990 production: New Zealand:59.08%, Australia:40.92%.

Table 7.1.2

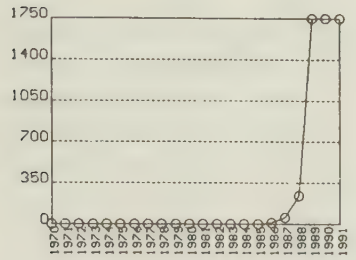
PACIFIC, SOUTHWEST
Ranking order and proportions of diadromous species (ISSCAAP GROUPS 21-25), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Chinook(=Spring=King)salmon	1	0	2 0.0%	0	2 0.0%
Atlantic salmon	2	0	3 0.0%	0	3 0.0%
Short-finned eel	3	1397	1 100.0%	900	1 100.0%
Rainbow trout	4	0	4 0.0%	0	4 0.0%
TOTALS		1397	100.0%	900	100.0%



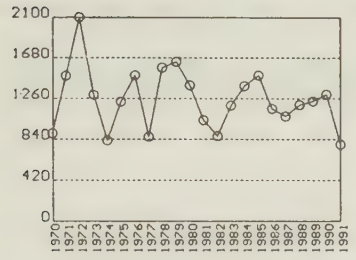
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Chinook(=Spring=King)salmon
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation.....
Trend..... 76.83 %
Rank..... 1 of 5 based on:1990
Percent to total..... 37.65 % , Cumulative: 37.65 %



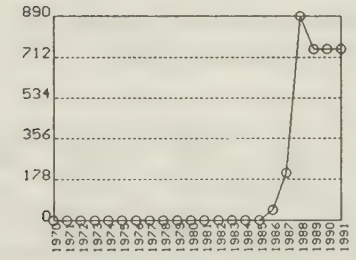
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Atlantic salmon
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation.....
Trend..... 81.55 %
Rank..... 2 of 5 based on:1990
Percent to total..... 28.65 % , Cumulative: 66.30 %



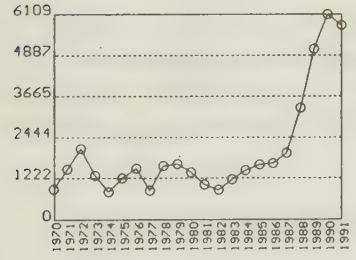
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Short-finned eel
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -3.29 %
Rank..... 3 of 5 based on:1990
Percent to total..... 21.43 % , Cumulative: 87.72 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Rainbow trout
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 75.98 %
Rank..... 4 of 5 based on:1990
Percent to total..... 12.28 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL DIADROMOUS
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 28.18 %
Rank..... 5 of 5 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.2 Production of flounders, halibuts, soles, etc. (ISSCAAP GROUP 31).

Table 7.2.1

PACIFIC, SOUTHWEST
Flounders, halibuts, soles, etc. (ISSCAAP GROUP 31), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Flatfishes nei	1	3313	100.0 %	Rising
Lefteye flounders	2	0	0.0 %	Sharp rise
Sand flounders	3	0	0.0 %	Declining
TOTAL FLOUNDERS, SOLES, ETC.		3313	100.0 %	Rising

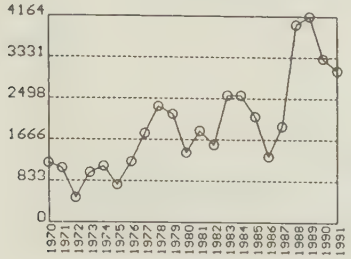
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	0.0 %

Major fishing countries ranked by 1990 production: New Zealand:100.00%.

Table 7.2.2

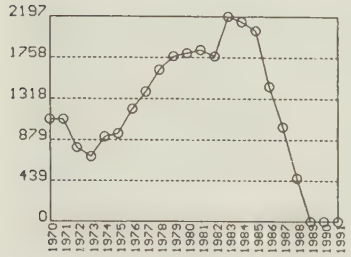
PACIFIC, SOUTHWEST
Ranking order and proportions of flounders, halibuts, soles, etc., (ISSCAAP GROUP 31), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Flatfishes nei	1	1406	2 43.8%	1200	1 52.2%
Lefteye flounders	2	0	3 0.0%	0	3 0.0%
Sand flounders	3	1806	1 56.2%	1100	2 47.8%
TOTALS		3212	100.0%	2300	100.0%



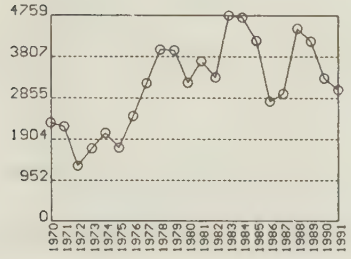
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Flatfishes nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 21.99 %
Rank..... 1 of 3 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sand flounders
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... -6.36 %
Rank..... 2 of 3 based on:1990
Percent to total..... 0.00 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL FLOUNDERS, SOLES, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 11.25 %
Rank..... 3 of 3 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.3 Production of cods, hakes, haddocks, etc. (ISSCAAP GROUP 32)

Table 7.3.1

PACIFIC, SOUTHWEST
Cods, hakes, haddocks, etc., (ISSCAAP GROUP 32), ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Blue grenadier	1	391781	85.3 %	Sharp rise
Southern blue whiting	2	42302	9.2 %	Rising
Southern hake	3	9672	2.1 %	Sharp rise
Gadiformes nei	4	8256	1.8 %	Rising
New Zealand red cod	5	7203	1.6 %	Rising
Grenadiers	6	0	0.0 %	Stable (+)
TOTAL CODS, HAKES, ETC.		459214	100.0 %	Rising

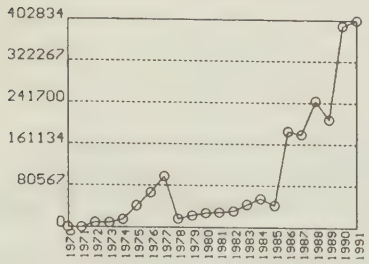
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: New Zealand:55.27%, Japan:36.96%, USSR:7.66%, Korea Rep:0.12%.

Table 7.3.2

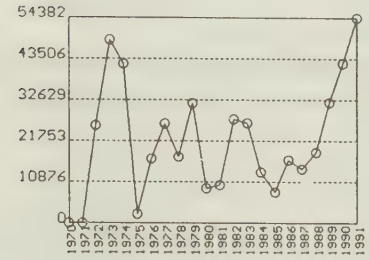
PACIFIC, SOUTHWEST
Ranking order and proportions of cods, hakes, haddocks, etc., (ISSCAAP GROUP 32), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Blue grenadier	1	27711	1 63.6%	100	2 10.0%
Southern blue whiting	2	9246	2 21.2%	0	3 0.0%
Southern hake	3	2554	4 5.9%	0	4 0.0%
Gadiformes nei	4	100	5 0.2%	0	5 0.0%
New Zealand red cod	5	3957	3 9.1%	900	1 90.0%
Grenadiers	6	0	6 0.0%	0	6 0.0%
TOTALS		43568	100.0%	1000	100.0%



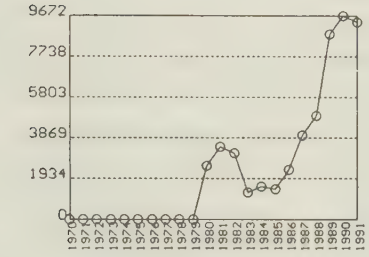
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Blue grenadier
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 53.61 %
Rank..... 1 of 6 based on:1990
Percent to total..... 85.32 % , Cumulative: 85.32 %



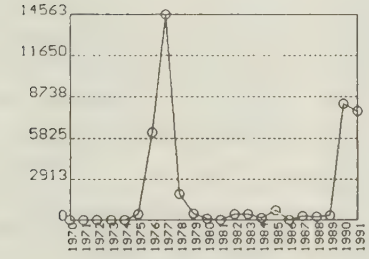
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Southern blue whiting
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 11.31 %
Rank..... 2 of 6 based on:1990
Percent to total..... 9.21 % , Cumulative: 94.53 %



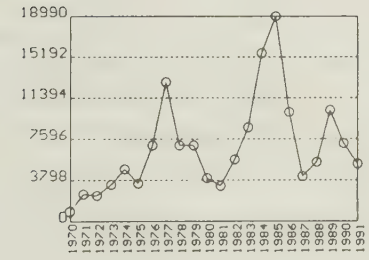
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Southern hake
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 59.78 %
Rank..... 3 of 6 based on:1990
Percent to total..... 2.11 % , Cumulative: 96.63 %



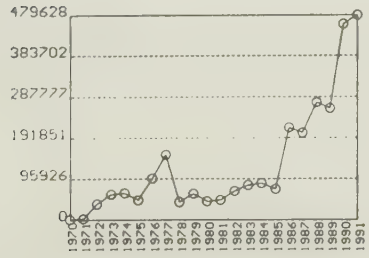
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Gadiformes nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 17.44 %
Rank..... 4 of 6 based on:1990
Percent to total..... 1.80 % , Cumulative: 98.43 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CODS, HAKES, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 15.66 %
Rank..... 5 of 6 based on:1990
Percent to total..... 1.57 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CODS, HAKES, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 44.02 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.4 Production of redfishes, basses, congers, etc. (ISSCAAP GROUP 33).

Table 7.4.1

PACIFIC, SOUTHWEST
Redfishes, basses, congers, etc. (ISSCAAP GROUP 33), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Orange roughy	1	49565	30.7 %	Rising
Oreo dories	2	20805	12.9 %	Rising
Demersal percomorphs nei	3	15281	9.5 %	Rising
South Pacific breams	4	12444	7.7 %	Rising
Cusk-eels nei	5	11781	7.3 %	Sharp rise
Golden snapper	6	9519	5.9 %	Declining
Ruff(=Australian salmon)	7	9171	5.7 %	Rising
Tarakihi	8	4998	3.1 %	Stable (-)
Cardinal fish	9	3500	2.2 %	Sharp rise
Morwongs	10	3408	2.1 %	Rising
Bluefin gurnard	11	3138	1.9 %	Stable (-)
Porgies, seabreams, nei	12	2437	1.5 %	Rising
Flatheads	13	2053	1.3 %	Stable (+)
Sillago-whitings	14	1926	1.2 %	Rising
John dory	15	1644	1.0 %	Rising
New Zealand blue cod	16	1644	1.0 %	Rising
Bluenose warehou	17	1573	1.0 %	Sharp rise
Alfonsinos	18	1459	0.9 %	Rising
Hapuku wreckfish	19	1091	0.7 %	Stable (+)
Percoids nei	20	948	0.6 %	Stable (+)
Puffers nei	21	824	0.5 %	Stable (-)
Groupers, seabasses nei	22	691	0.4 %	Rising
Filefishes	23	366	0.2 %	Stable (-)
Mulloway	24	354	0.2 %	Stable (+)
Trumpeters	25	342	0.2 %	Declining
Latchet(=Sharpbeak gurnard)	26	191	0.1 %	Stable (+)
Ruffs, barrelfishes nei	27	109	0.1 %	Rising
Teraglin	28	83	0.1 %	Stable (-)
Scorpionfishes, nei	29	17	0.0 %	Sharp rise
Argentines	30	14	0.0 %	Declining
Grunts, sweetlips, nei	31	1	0.0 %	Declining
TOTAL REDFISHES, BASSES, ETC.		161377	100.0 %	Rising

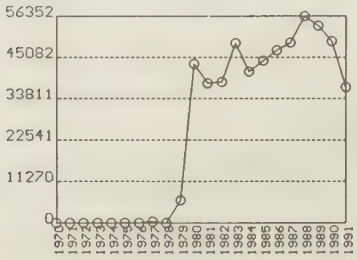
Proportion coming from declining catches.....	6.1 %
from stable catches.....	8.7 %
from rising catches.....	85.2 %

Major fishing countries ranked by 1990 production: New Zealand:80.96%, Australia:12.09%, Japan:4.62%, Korea Rep:1.02%, Norway:0.71%, USSR:0.59%.

Table 7.4.2

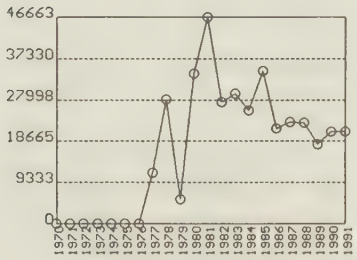
PACIFIC, SOUTHWEST
Ranking order and proportions of redfishes, basses, congers, etc., (ISSCAAP GROUP 33), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Orange roughy	1	43327	1 27.7%	0	35 0.0%
Oreo dories	2	34069	2 21.7%	0	22 0.0%
Demersal percomorphs nei	3	32616	3 20.8%	500	13 1.4%
South Pacific breams	4	5238	5 3.3%	400	16 1.1%
Cusk-eels nei	5	2483	9 1.6%	300	17 0.9%
Golden snapper	6	13157	4 8.4%	14100	1 40.1%
Ruff(=Australian salmon)	7	3528	7 2.3%	900	8 2.6%
Tarakihi	8	5123	6 3.3%	5200	2 14.8%
Cardinal fish	9	0	35 0.0%	0	34 0.0%
Morwongs	10	1364	12 0.9%	800	10 2.3%
Bluefin gurnard	11	3528	8 2.3%	4200	3 11.9%
Porgies, seabreams, nei	12	638	17 0.4%	500	14 1.4%
Flatheads	13	1217	13 0.8%	1600	4 4.6%
Sillago-whitings	14	757	16 0.5%	100	18 0.3%
John dory	15	1217	14 0.8%	700	12 2.0%
New Zealand blue cod	16	576	18 0.4%	1000	6 2.8%
Bluenose warehou	17	0	30 0.0%	0	29 0.0%
Alfonsinos	18	2325	10 1.5%	0	23 0.0%
Hapuku wreckfish	19	2273	11 1.5%	1600	5 4.6%
Percoids nei	20	349	20 0.2%	700	11 2.0%
Puffers nei	21	334	21 0.2%	800	9 2.3%
Groupers, seabasses nei	22	268	23 0.2%	0	24 0.0%
Filefishes	23	486	19 0.3%	500	15 1.4%
Mulloway	24	249	24 0.2%	100	20 0.3%
Trumpeters	25	929	15 0.6%	1000	7 2.8%
Latchet(=Sharpbeak gurnard)	26	178	25 0.1%	100	21 0.3%
Ruffs, barrelfishes nei	27	89	26 0.1%	0	25 0.0%
Teraglin	28	89	27 0.1%	100	19 0.3%
Scorpionfishes, nei	29	0	31 0.0%	0	30 0.0%
Argentines	30	286	22 0.2%	0	26 0.0%
Grunts, sweetlips, nei	31	22	28 0.0%	0	27 0.0%
Croakers, drums nei	32	2	29 0.0%	0	28 0.0%
Groupers nei	33	0	32 0.0%	0	31 0.0%
Conger eels nei	34	0	33 0.0%	0	32 0.0%
Greater lizardfish	35	0	34 0.0%	0	33 0.0%
TOTALS		156717	100.0%	35200	100.0%



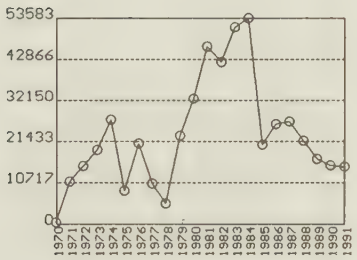
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Orange roughy
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 44.40 %
Rank..... 1 of 11 based on:1990
Percent to total..... 31.39 % , Cumulative: 31.39 %



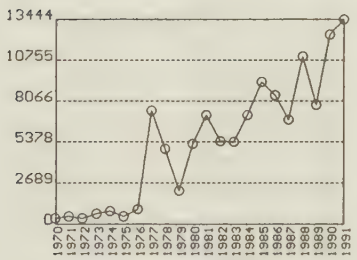
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Oreo dories
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 29.52 %
Rank..... 2 of 11 based on:1990
Percent to total..... 13.18 % , Cumulative: 44.57 %



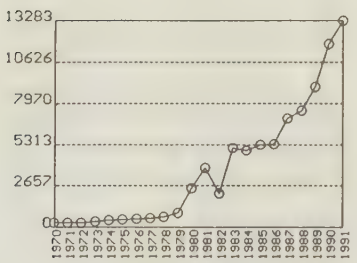
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Demersal percomorphs nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 10 %
Trend..... 10.51 %
Rank..... 3 of 11 based on:1990
Percent to total..... 9.68 % , Cumulative: 54.25 %



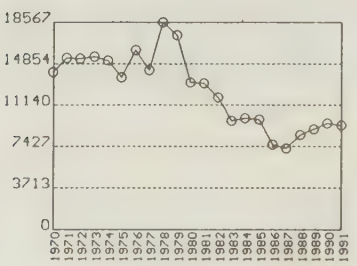
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....South Pacific breams
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 37.90 %
Rank..... 4 of 11 based on:1990
Percent to total..... 7.88 % , Cumulative: 62.13 %



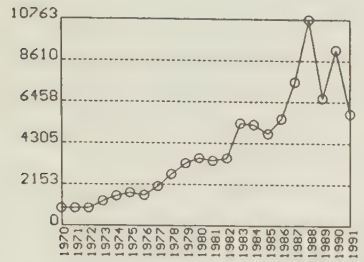
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Cusk-eels nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 51.71 %
Rank..... 5 of 11 based on:1990
Percent to total..... 7.46 % , Cumulative: 69.60 %



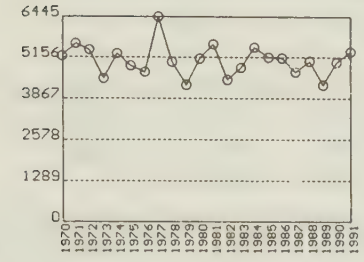
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Golden snapper
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend.....-11.71 %
Rank..... 6 of 11 based on:1990
Percent to total..... 6.03 % , Cumulative: 75.63 %



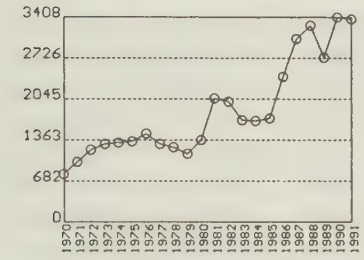
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Ruff(=Australian salmon)
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 33.77 %
Rank..... 7 of 11 based on:1990
Percent to total..... 5.81 % , Cumulative: 81.43 %



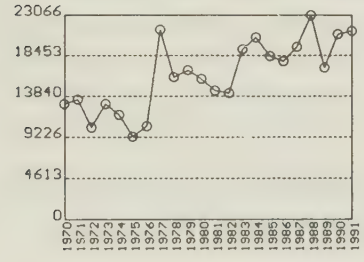
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Tarakihi
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... -1.05 %
Rank..... 8 of 11 based on:1990
Percent to total..... 3.17 % , Cumulative: 84.60 %



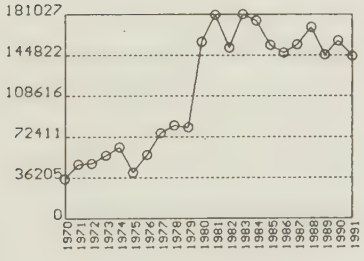
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Morwongs
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 21.27 %
Rank..... 9 of 11 based on:1990
Percent to total..... 2.16 % , Cumulative: 86.76 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER REDFISHES, BASSES, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... 10.29 %
Rank..... 10 of 11 based on:1990
Percent to total..... 13.23 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL REDFISHES, BASSES, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 21.48 %
Rank..... 11 of 11 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.5 Production of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34).

Table 7.5.1

PACIFIC, SOUTHWEST
Jacks, mullets, sauries, etc. (ISSCAAP GROUP 34),
ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Greenback horse mackerel	1	67518	51.0 %	Sharp rise
Jack and horse mackerels nei	2	42692	32.2 %	Rising
Mullets nei	3	6961	5.3 %	Rising
Butterfishes, silver pomfrets	4	6615	5.0 %	Rising
Pelagic percomorphs nei	5	3467	2.6 %	Rising
New Zealand trevally	6	2874	2.2 %	Declining
Amberjacks nei	7	1712	1.3 %	Rising
Halfbeaks nei	8	449	0.3 %	Rising
Bluefish	9	187	0.1 %	Stable (+)
Barracudas	10	0	0.0 %	Declining
Common dolphinfish	11	0	0.0 %	Rising
TOTAL JACKS, MULLETS, ETC.		132475	100.0 %	Rising

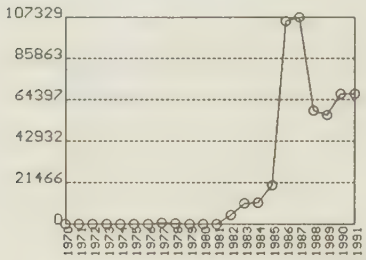
Proportion coming from declining catches.....	2.2 %
from stable catches.....	0.1 %
from rising catches.....	97.7 %

Major fishing countries ranked by 1990 production: USSR:50.97%, New Zealand:24.25%, Japan:15.14%, Australia:8.55%, Korea Rep:1.08%.

Table 7.5.2

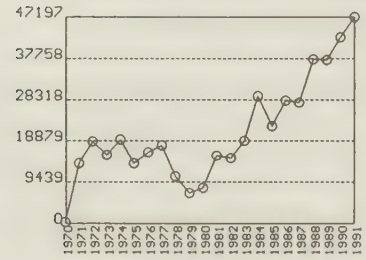
PACIFIC, SOUTHWEST
Ranking order and proportions of jacks, mullets, sauries, etc. (ISSCAAP GROUP 34), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Greenback horse mackerel	1	13	9 0.1%	0	9 0.0%
Jack and horse mackerels nei	2	8188	1 34.9%	300	5 3.2%
Mullets nei	3	3742	4 16.0%	3000	2 32.3%
Butterfishes, silver pomfrets	4	4819	2 20.6%	0	8 0.0%
Pelagic percomorphs nei	5	1551	5 6.6%	800	4 8.6%
New Zealand trevally	6	4324	3 18.5%	4200	1 45.2%
Amberjacks nei	7	531	6 2.3%	800	3 8.6%
Halfbeaks nei	8	138	7 0.6%	100	6 1.1%
Bluefish	9	133	8 0.6%	100	7 1.1%
Barracudas	10	0	10 0.0%	0	10 0.0%
Common dolphinfish	11	0	11 0.0%	0	11 0.0%
TOTALS		23439	100.0%	9300	100.0%



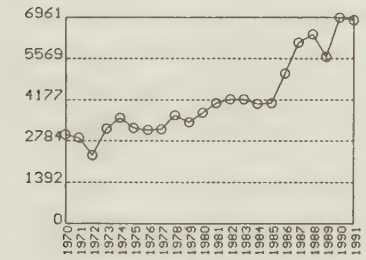
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Greenback horse mackerel
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 63.16 %
Rank..... 1 of 10 based on:1990
Percent to total..... 50.97 % , Cumulative: 50.97 %



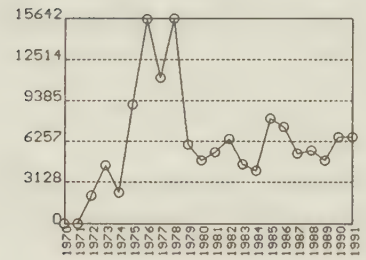
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Jack and horse mackerels nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 24.94 %
Rank..... 2 of 10 based on:1990
Percent to total..... 32.23 % , Cumulative: 83.19 %



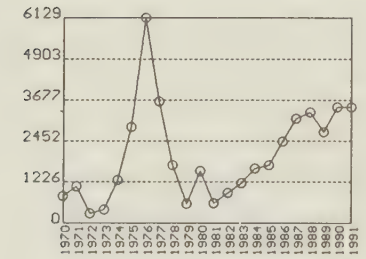
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Mullets nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 15.75 %
Rank..... 3 of 10 based on:1990
Percent to total..... 5.25 % , Cumulative: 88.45 %



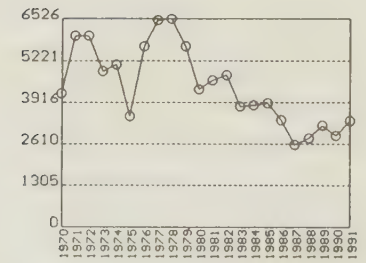
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Butterfishes, silver pomfrets
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 5.66 %
Rank..... 4 of 10 based on:1990
Percent to total..... 4.99 % , Cumulative: 93.44 %



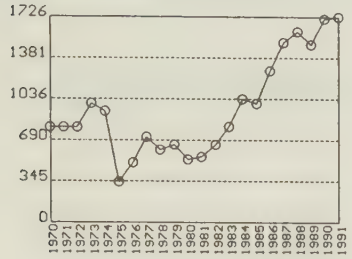
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pelagic percomorphs nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 7 %
Trend..... 14.38 %
Rank..... 5 of 10 based on:1990
Percent to total..... 2.62 % , Cumulative: 96.06 %



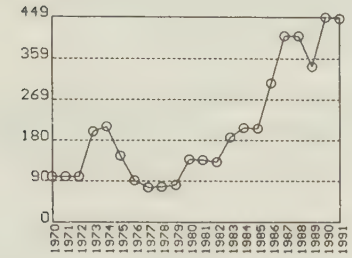
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....New Zealand trevally
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-10.75 %
Rank..... 6 of 10 based on:1990
Percent to total..... 2.17 % , Cumulative: 98.23 %



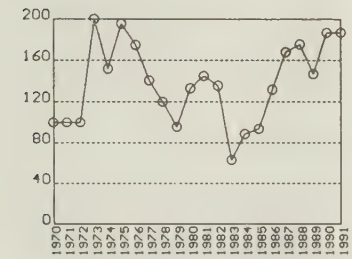
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Amberjacks nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 17.17 %
Rank..... 7 of 10 based on:1990
Percent to total..... 1.29 % , Cumulative: 99.52 %



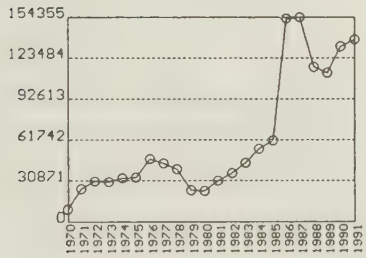
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Halfbeaks nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 26.87 %
Rank..... 8 of 10 based on:1990
Percent to total..... 0.34 % , Cumulative: 99.86 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bluefish
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 3.12 %
Rank..... 9 of 10 based on:1990
Percent to total..... 0.14 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL JACKS, MULLETS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 33.58 %
Rank..... 10 of 10 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.6 Production of herrings, sardines, anchovies, etc., (ISSCAAP GROUP 35).
Negligible.

7.7 Production of tunas, bonitos, billfishes, etc., (ISSCAAP GROUP 36).

Table 7.7.1

PACIFIC, SOUTHWEST
Tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Albacore	1	13823	46.8 %	Stable (-)
Skipjack tuna	2	4689	15.9 %	Rising
Southern bluefin tuna	3	4210	14.2 %	Declining
Yellowfin tuna	4	2047	6.9 %	Declining
Bigeye tuna	5	1620	5.5 %	Declining
Seerfishes nei	6	1151	3.9 %	Rising
Swordfish	7	1138	3.9 %	Stable (+)
Striped marlin	8	697	2.4 %	Declining
Indo-Pacific blue marlin	9	112	0.4 %	Declining
Indo-Pacific sailfish	10	40	0.1 %	Rising
Narrow-barred Spanish mackerel	11	23	0.1 %	Stable (+)
Tuna-like fishes nei	12	21	0.1 %	Rising
Frigate and bullet tunas	13	0	0.0 %	Rising
Black marlin	14	0	0.0 %	Rising
Longtail tuna	15	0	0.0 %	Sharp decl
Marlins,sailfishes,spearfishes	16	0	0.0 %	Sharp decl
TOTAL TUNAS, BONITOS, ETC.		29571	100.0 %	Declining

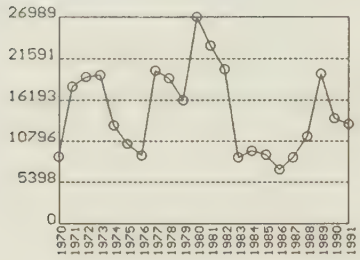
Proportion coming from declining catches.....	29.4 %
from stable catches.....	50.7 %
from rising catches.....	20.0 %

Major fishing countries ranked by 1990 production: Japan:44.31%, New Zealand:25.79%, USA:14.13%, Other nei A:8.34%, Korea Rep:3.75%, Australia:3.69%.

Table 7.7.2

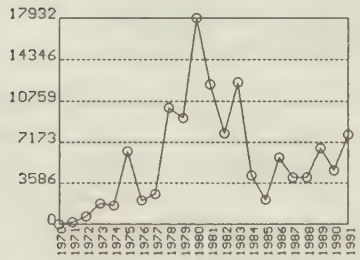
PACIFIC, SOUTHWEST
Ranking order and proportions of tunas, bonitos, billfishes, etc. (ISSCAAP GROUP 36), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Albacore	1	26989	1 34.5%	8800	2 24.1%
Skipjack tuna	2	17932	2 22.9%	0	9 0.0%
Southern bluefin tuna	3	13886	3 17.8%	20800	1 57.0%
Yellowfin tuna	4	10725	4 13.7%	1500	4 4.1%
Bigeye tuna	5	6194	5 7.9%	2200	3 6.0%
Seerfishes nei	6	0	16 0.0%	0	15 0.0%
Swordfish	7	895	6 1.1%	1100	6 3.0%
Striped marlin	8	456	8 0.6%	1200	5 3.3%
Indo-Pacific blue marlin	9	529	7 0.7%	600	7 1.6%
Indo-Pacific sailfish	10	78	11 0.1%	0	10 0.0%
Narrow-barred Spanish mackerel	11	77	12 0.1%	0	11 0.0%
Tuna-like fishes nei	12	181	10 0.2%	300	8 0.8%
Frigate and bullet tunas	13	1	14 0.0%	0	13 0.0%
Black marlin	14	14	13 0.0%	0	12 0.0%
Longtail tuna	15	0	15 0.0%	0	14 0.0%
Marlins,sailfishes,spearfishes	16	287	9 0.4%	0	16 0.0%
TOTALS		78244	100.0%	36500	100.0%



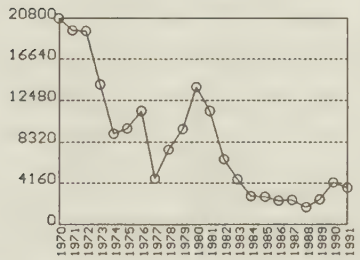
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Albacore
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... -4.13 %
Rank..... 1 of 12 based on:1990
Percent to total..... 46.75 % , Cumulative: 46.75 %



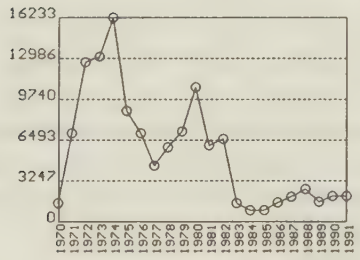
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skipjack tuna
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... 14.76 %
Rank..... 2 of 12 based on:1990
Percent to total..... 15.86 % , Cumulative: 62.60 %



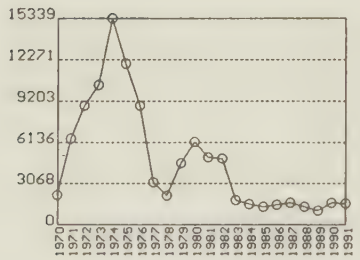
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Southern bluefin tuna
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend.....-33.09 %
Rank..... 3 of 12 based on:1990
Percent to total..... 14.24 % , Cumulative: 76.84 %



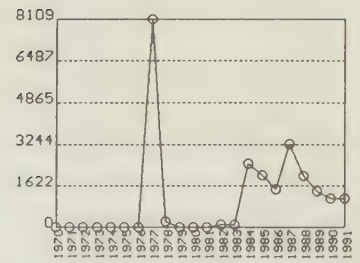
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Yellowfin tuna
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend.....-28.48 %
Rank..... 4 of 12 based on:1990
Percent to total..... 6.92 % , Cumulative: 83.76 %



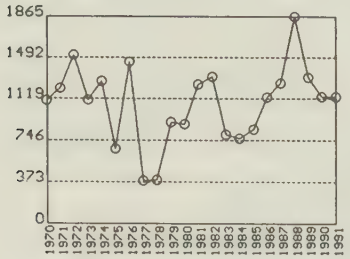
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Bigeye tuna
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend.....-31.34 %
Rank..... 5 of 12 based on:1990
Percent to total..... 5.48 % , Cumulative: 89.24 %



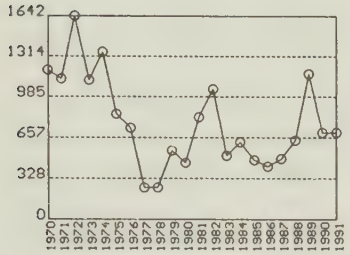
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Seerfishes nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 25.54 %
Rank..... 6 of 12 based on:1990
Percent to total..... 3.89 % , Cumulative: 93.13 %



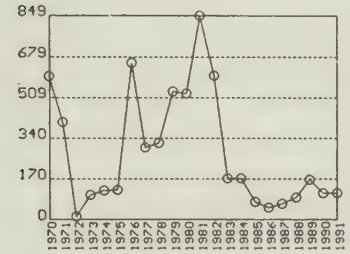
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Swordfish
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 15 %
Trend..... 2.36 %
Rank..... 7 of 12 based on:1990
Percent to total..... 3.85 % , Cumulative: 96.98 %



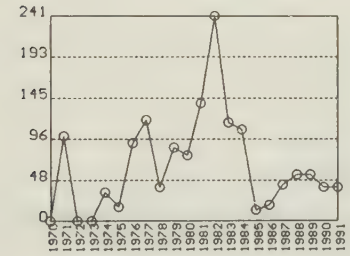
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Striped marlin
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend.....-11.80 %
Rank..... 8 of 12 based on:1990
Percent to total..... 2.36 % , Cumulative: 99.34 %



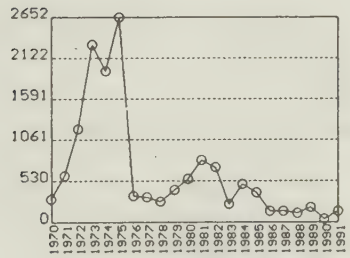
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indo-Pacific blue marlin
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend.....-14.98 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.38 % , Cumulative: 99.72 %



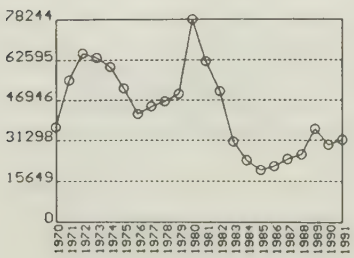
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Indo-Pacific sailfish
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 5.19 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.14 % , Cumulative: 99.85 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER TUNAS, BONITOS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-34.20 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.15 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL TUNAS, BONITOS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend.....-13.17 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.8 Production of mackerels, snoeks, cutlassfishes, etc. (ISSCAAP GROUP 37).

Table 7.8.1

PACIFIC, SOUTHWEST
Mackerels, snoeks, cutlassfishes, etc.,
(ISSCAAP GROUP 37), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Snoek	1	29445	59.9 %	Rising
Royal escolar	2	9259	18.8 %	Rising
Blue mackerel	3	7658	15.6 %	Sharp rise
Silver scabbardfish	4	2406	4.9 %	Sharp rise
Chub mackerel	5	371	0.8 %	Sharp rise
Hairtails, cutlassfishes, nei	6	0	0.0 %	Sharp rise
Mackerel-like fishes nei	7	0	0.0 %	Sharp decl
TOTAL MACKERELS, SNOEKS, ETC.		49139	100.0 %	Rising

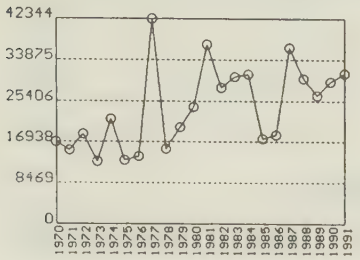
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: New Zealand:79.11%, Australia:10.97%, Japan:9.92%.

Table 7.8.2

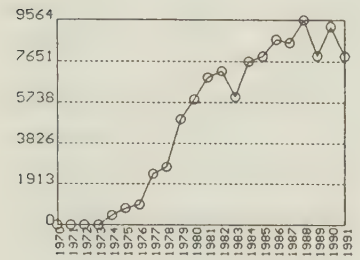
PACIFIC, SOUTHWEST
Ranking order and proportions of mackerels, snoeks, cutlassfishes, etc.,
(ISSCAAP GROUP 37), in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Snoek	1	24266	1 77.4%	17000	1 100.0%
Royal escolar	2	5907	2 18.8%	0	3 0.0%
Blue mackerel	3	1193	3 3.8%	0	2 0.0%
Silver scabbardfish	4	3	4 0.0%	0	7 0.0%
Chub mackerel	5	0	5 0.0%	0	4 0.0%
Hairtails, cutlassfishes, nei	6	0	6 0.0%	0	5 0.0%
Mackerel-like fishes nei	7	0	7 0.0%	0	6 0.0%
TOTALS		31369	100.0%	17000	100.0%



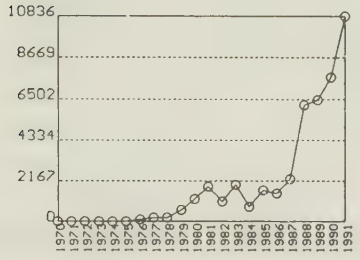
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Snoek
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 20 %
Trend..... 10.48 %
Rank..... 1 of 6 based on:1990
Percent to total..... 59.92 % , Cumulative: 59.92 %



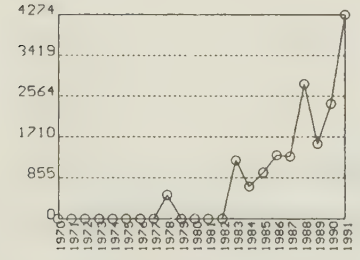
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Royal escolar
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 38.44 %
Rank..... 2 of 6 based on:1990
Percent to total..... 18.84 % , Cumulative: 78.76 %



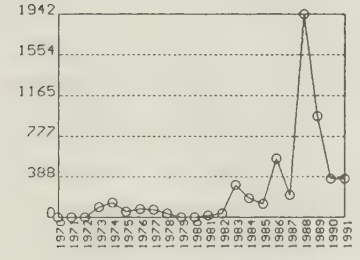
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Blue mackerel
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 63.45 %
Rank..... 3 of 6 based on:1990
Percent to total..... 15.58 % , Cumulative: 94.35 %



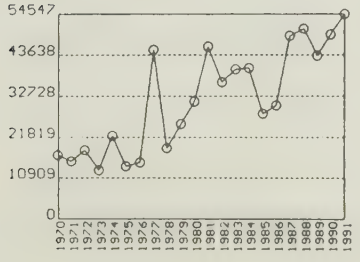
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Silver scabbardfish
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 64.45 %
Rank..... 4 of 6 based on:1990
Percent to total..... 4.90 % , Cumulative: 99.24 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MACKERELS, SNOEKS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 52.92 %
Rank..... 5 of 6 based on:1990
Percent to total..... 0.76 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MACKERELS, SNOEKS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 14 %
Trend..... 19.68 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.9 Production of sharks, rays, chimaeras, etc. (ISSCAAP GROUP 38).

Table 7.9.1

PACIFIC, SOUTHWEST
Sharks, rays, etc. (ISSCAAP GROUP 38), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Sharks, rays, skates, etc	1	6469	34.3 %	Rising
Dogfish sharks nei	2	4361	23.1 %	Sharp rise
Requiem sharks	3	2528	13.4 %	Rising
Skates and rays, nei	4	2039	10.8 %	Sharp rise
Elephantfishes	5	1848	9.8 %	Rising
Smoothhounds	6	1641	8.7 %	Rising
TOTAL SHARKS, RAYS, ETC.		18886	100.0 %	Rising

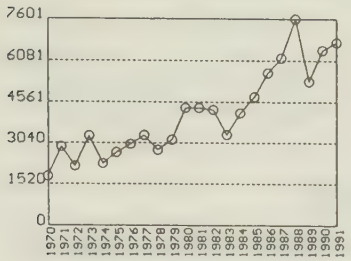
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: New Zealand:64.96%, Australia:17.87%, Korea Rep:9.49%, Japan:7.68%.

Table 7.9.2

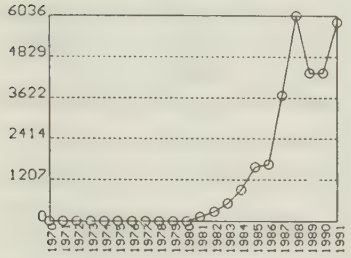
PACIFIC, SOUTHWEST
Ranking order and proportions of sharks,rays,etc., in 1990,1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Sharks, rays, skates, etc	1	4359	1 39.8%	1800	1 40.9%
Dogfish sharks nei	2	0	6 0.0%	0	6 0.0%
Requiem sharks	3	1949	3 17.8%	900	3 20.5%
Skates and rays, nei	4	441	5 4.0%	0	5 0.0%
Elephantfishes	5	1200	4 11.0%	1100	2 25.0%
Smoothhounds	6	3000	2 27.4%	600	4 13.6%
TOTALS		10949	100.0%	4400	100.0%



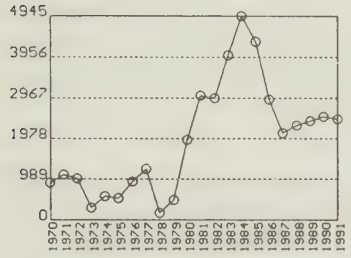
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sharks, rays, skates, etc
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 19.22 %
Rank..... 1 of 6 based on:1990
Percent to total..... 34.25 % , Cumulative: 34.25 %



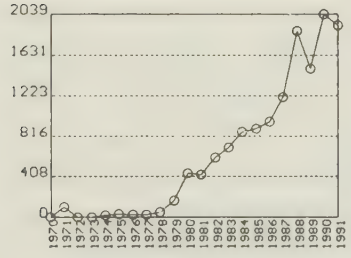
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Dogfish sharks nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 68.09 %
Rank..... 2 of 6 based on:1990
Percent to total..... 23.09 % , Cumulative: 57.34 %



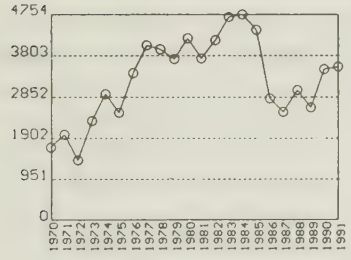
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Requiem sharks
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 24.67 %
Rank..... 3 of 6 based on:1990
Percent to total..... 13.39 % , Cumulative: 70.73 %



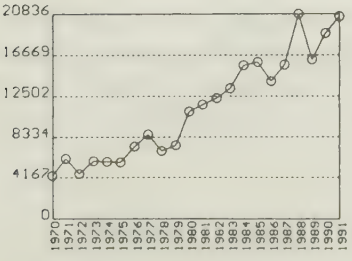
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Skates and rays, nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 54.83 %
Rank..... 4 of 6 based on:1990
Percent to total..... 10.80 % , Cumulative: 81.53 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER SHARKS, RAYS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 6.98 %
Rank..... 5 of 6 based on:1990
Percent to total..... 18.48 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL SHARKS, RAYS, ETC.
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 24.39 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.10 Production of crustaceans (ISSCAAP GROUPS 41-47).

Table 7.10.1

PACIFIC, SOUTHWEST
Crustaceans (ISSCAAP GROUPS 41-47), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Red rock lobster	1	3120	45.2 %	Stable (-)
Natantian decapods nei	2	2210	32.0 %	Stable (+)
New Zealand lobster	3	627	9.1 %	Sharp rise
Sand crab	4	436	6.3 %	Rising
Green rock lobster	5	224	3.2 %	Rising
Marine crabs nei	6	221	3.2 %	Rising
Slipper lobsters	7	71	1.0 %	Rising
TOTAL CRUSTACEANS		6909	100.0 %	Stable (+)

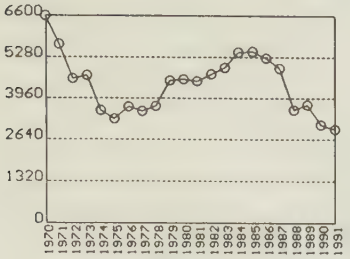
Proportion coming from declining catches.....	0.0 %
from stable catches.....	77.2 %
from rising catches.....	22.9 %

Major fishing countries ranked by 1990 production: New Zealand:57.46%, Australia:42.54%.

Table 7.10.2

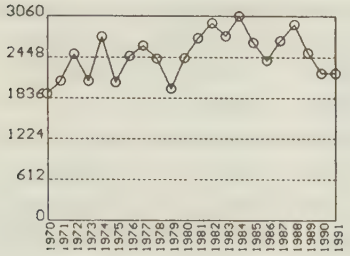
PACIFIC, SOUTHWEST
Ranking order and proportions of crustaceans
(ISSCAAP GROUPS 41-47), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Red rock lobster	1	4575	1 60.6%	6600	1 75.9%
Natantian decapods nei	2	2436	2 32.3%	1900	2 21.8%
New Zealand lobster	3	0	7 0.0%	0	7 0.0%
Sand crab	4	327	3 4.3%	100	3 1.2%
Green rock lobster	5	148	4 2.0%	100	4 1.2%
Marine crabs nei	6	22	6 0.3%	0	6 0.0%
Slipper lobsters	7	36	5 0.5%	0	5 0.0%
TOTALS		7544	100.0%	8700	100.0%



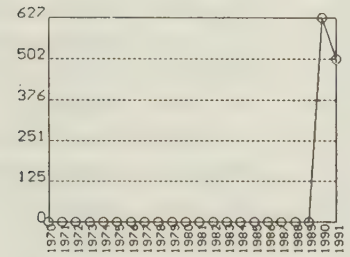
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Red rock lobster
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... -3.61 %
Rank..... 1 of 6 based on:1990
Percent to total..... 45.16 % , Cumulative: 45.16 %



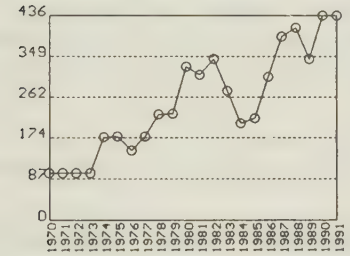
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Natantian decapods nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 18 %
Trend..... 2.73 %
Rank..... 2 of 6 based on:1990
Percent to total..... 31.99 % , Cumulative: 77.15 %



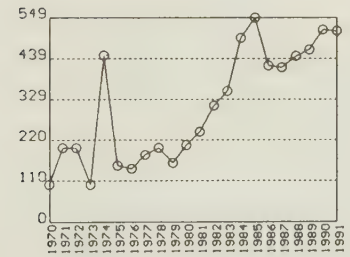
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....New Zealand lobster
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 3 %
Trend..... 86.47 %
Rank..... 3 of 6 based on:1990
Percent to total..... 9.08 % , Cumulative: 86.22 %



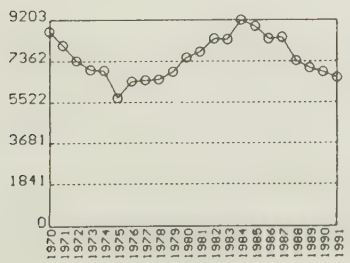
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Sand crab
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... 21.88 %
Rank..... 4 of 6 based on:1990
Percent to total..... 6.31 % , Cumulative: 92.53 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER CRUSTACEANS
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 21.74 %
Rank..... 5 of 6 based on:1990
Percent to total..... 7.47 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL CRUSTACEANS
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 4 %
Trend..... 0.99 %
Rank..... 6 of 6 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

7.11 Production of molluscs (ISSCAAP GROUPS 51-58).

Table 7.11.1

PACIFIC, SOUTHWEST
Molluscs (ISSCAAP GROUPS 51-58), ranked by 1990 catches

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Squids nei	1	55228	40.7 %	Rising
Wellington flying squid	2	38115	28.1 %	Rising
New Zealand mussel	3	24000	17.7 %	Sharp rise
Cupped oysters nei	4	7272	5.4 %	Declining
New Zealand dredge oyster	5	3838	2.8 %	Declining
Pacific cupped oyster	6	1690	1.3 %	Sharp rise
Common squids	7	1364	1.0 %	Sharp rise
Marine molluscs nei	8	1247	0.9 %	Declining
Abalones nei	9	1228	0.9 %	Rising
Blacklip abalone	10	572	0.4 %	Declining
New Zealand scallop	11	563	0.4 %	Declining
Cuttlefishes, bobtail squids	12	303	0.2 %	Rising
Octopuses	13	158	0.1 %	Sharp rise
Australian mussel	14	132	0.1 %	Rising
Scallops nei	15	13	0.0 %	Declining
TOTAL MOLLUSCS		135723	100.0 %	Rising

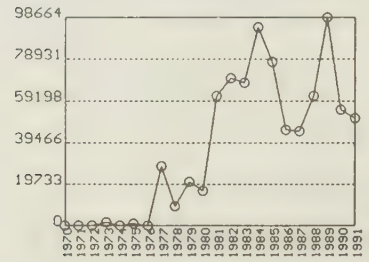
Proportion coming from declining catches.....	10.0 %
from stable catches.....	0.0 %
from rising catches.....	90.0 %

Major fishing countries ranked by 1990 production: New Zealand:50.97%, USSR:17.25%, Korea Rep:9.68%, Australia:7.46%, Other nei A:7.37%, Japan:7.27%.

Table 7.11.2

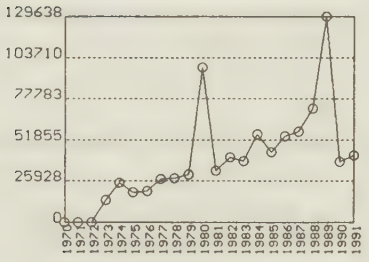
PACIFIC, SOUTHWEST
Ranking order and proportions of molluscs (ISSCAAP GROUPS 51-58), in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Squids nei	1	16627	2 12.1%	0	11 0.0%
Wellington flying squid	2	97703	1 71.2%	0	15 0.0%
New Zealand mussel	3	1570	6 1.1%	1000	3 4.7%
Cupped oysters nei	4	8143	4 5.9%	9500	1 45.0%
New Zealand dredge oyster	5	9195	3 6.7%	8900	2 42.2%
Pacific cupped oyster	6	0	14 0.0%	0	13 0.0%
Common squids	7	434	9 0.3%	0	9 0.0%
Marine molluscs nei	8	315	10 0.2%	100	8 0.5%
Abalones nei	9	747	7 0.5%	600	5 2.8%
Blacklip abalone	10	650	8 0.5%	300	6 1.4%
New Zealand scallop	11	1570	5 1.1%	600	4 2.8%
Cuttlefishes, bobtail squids	12	139	11 0.1%	0	10 0.0%
Octopuses	13	0	15 0.0%	0	14 0.0%
Australian mussel	14	122	12 0.1%	100	7 0.5%
Scallops nei	15	104	13 0.1%	0	12 0.0%
TOTALS		137319	100.0%	21100	100.0%



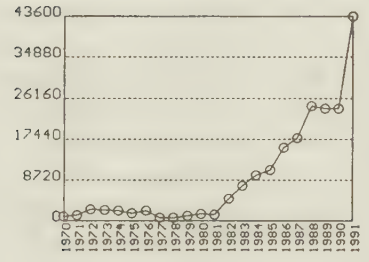
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Squids nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 40.01 %
Rank..... 1 of 12 based on:1990
Percent to total..... 40.69 % , Cumulative: 40.69 %



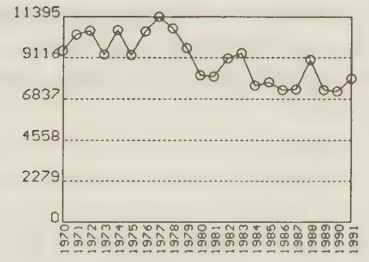
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Wellington flying squid
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... 29.89 %
Rank..... 2 of 12 based on:1990
Percent to total..... 28.08 % , Cumulative: 68.77 %



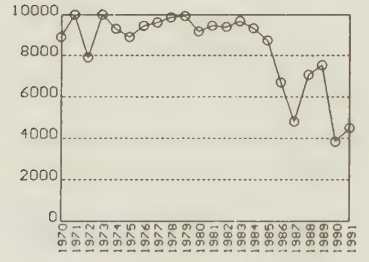
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....New Zealand mussel
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 55.56 %
Rank..... 3 of 12 based on:1990
Percent to total..... 17.68 % , Cumulative: 86.46 %



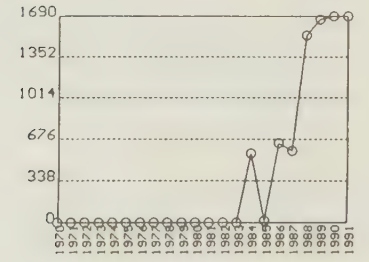
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Cupped oysters nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 13 %
Trend..... -6.03 %
Rank..... 4 of 12 based on:1990
Percent to total..... 5.36 % , Cumulative: 91.82 %



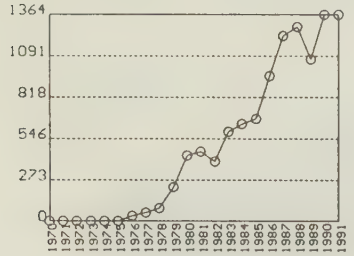
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....New Zealand dredge oyster
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 11 %
Trend..... -8.34 %
Rank..... 5 of 12 based on:1990
Percent to total..... 2.83 % , Cumulative: 94.64 %



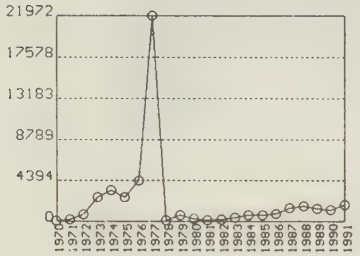
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Pacific cupped oyster
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 6 %
Trend..... 71.38 %
Rank..... 6 of 12 based on:1990
Percent to total..... 1.25 % , Cumulative: 95.89 %



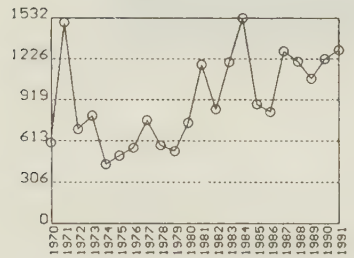
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Common squids
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 2 %
Trend..... 52.59 %
Rank..... 7 of 12 based on:1990
Percent to total..... 1.00 % , Cumulative: 96.89 %



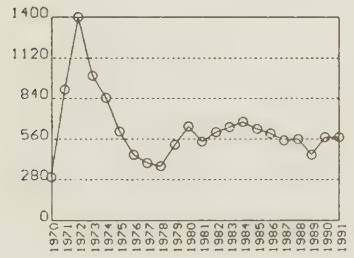
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Marine molluscs nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 8 %
Trend.....-16.05 %
Rank..... 8 of 12 based on:1990
Percent to total..... 0.92 % , Cumulative: 97.81 %



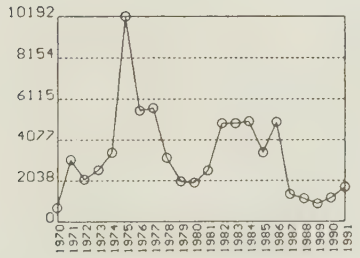
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Abalones nei
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 18 %
Trend..... 10.54 %
Rank..... 9 of 12 based on:1990
Percent to total..... 0.90 % , Cumulative: 98.72 %



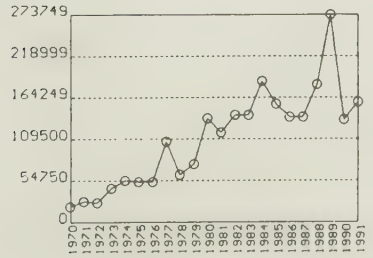
Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....Blacklip abalone
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 5 %
Trend..... -6.96 %
Rank..... 10 of 12 based on:1990
Percent to total..... 0.42 % , Cumulative: 99.14 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....OTHER MOLLUSCS
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

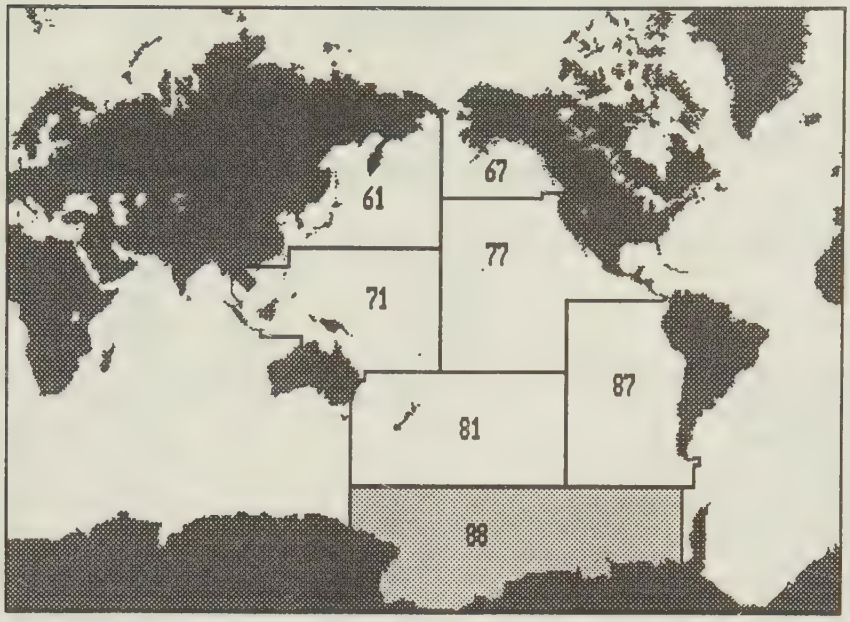
Fluctuation..... 9 %
Trend..... -8.80 %
Rank..... 11 of 12 based on:1990
Percent to total..... 0.86 % , Cumulative:100.00 %



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL MOLLUSCS
Area.....PACIFIC, SOUTHWEST
Unit.....Metric tons

Fluctuation..... 9 %
Trend..... 27.35 %
Rank..... 12 of 12 based on:1990
Percent to total.....100.00 % , Cumulative:100.00 %

8. PACIFIC, ANTARCTIC (Area 88)



8.1 Production of diadromous and marine fish, crustaceans and molluscs.

Table 8.1.1

PACIFIC, ANTARCTIC
Diadromous and marine fish, crustaceans and molluscs ranked by 1990 production

SPECIES	RANK IN 1990	CATCH (MT) 1990	PERCENT OF TOTAL	LINEAR TREND
Antarctic krill	1	658	100.0 %	Rising
Lanternfishes	2	0	0.0 %	Sharp rise
Antarctic rockcods	3	0	0.0 %	Stable (+)
Antarctic silverfish	4	0	0.0 %	Stable (+)
Mackerel icefish	5	0	0.0 %	Rising
Squids nei	6	0	0.0 %	Declining
TOTAL OF ALL SPECIES		658	100.0 %	Rising

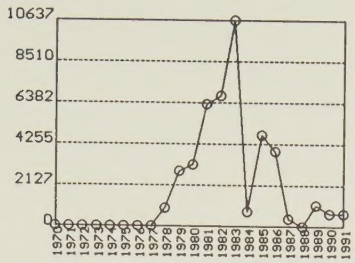
Proportion coming from declining catches.....	0.0 %
from stable catches.....	0.0 %
from rising catches.....	100.0 %

Major fishing countries ranked by 1990 production: USSR:100%.

Table 8.1.2

PACIFIC, ANTARCTIC
Ranking order and proportions of diadromous and marine fish, crustaceans and molluscs, in 1990, 1980 and 1970

SPECIES	RANK IN 1990	CATCH (MT) -1980-	RANK AND PERCENT -1980-	CATCH (MT) -1970-	RANK AND PERCENT -1970-
Antarctic krill	1	3181	1 100.0%	0	1 100.0%
Lanternfishes	2	0	2 0.0%	0	2 0.0%
Antarctic rockcods	3	0	3 0.0%	0	3 0.0%
Antarctic silverfish	4	0	4 0.0%	0	4 0.0%
Mackerel icefish	5	0	5 0.0%	0	5 0.0%
Squids nei	6	0	6 0.0%	0	6 0.0%
TOTALS		3181	100.0%	0	100.0%



Year range.....1970-1991
Country.....ALL COUNTRIES
Species.....TOTAL OF ALL SPECIES
Area.....PACIFIC, ANTARCTIC
Unit.....Metric tons

Fluctuation..... 8 %
Trend..... 20.70 %
Rank.....
.....

U9520E/1/2.93/2000